

The Southern Indian Ocean Fisheries Agreement (SIOFA) 4th Meeting of the Parties
26-30 June 2017

Aanari Hotel & Spa, Flic and Flac, Mauritius

Chair: Mr Kristofer Du Rietz

MoP-04-09

Technical edits to Conservation and Management Measures

Relates to agenda item: 11

Proposal Other Document Info Paper

Delegation of Australia

Abstract

Australia is proposing minor, technical amendments to 5 SIOFA CMMs that were adopted in July 2016 at SIOFA 3. These changes do not constitute any substantive change to the measures.

Recommendations *(proposals only)*

1. Adopt the recommended technical amendments to CMMs 2016/01, 0216/02, 0216/03, 2016/04 and 2016/05. Consistent with the Rules of Procedure, proposed amendments are included in tracked changes in annexes A – E, with clean versions at annexes F-J.

Technical edits to SIOFA CMMs proposed by Australia

Australia is pleased to propose technical amendments to five CMMs adopted at SIOFA 3 in 2016. These changes are simple and, in our view, do not constitute any substantive change to the CMMs. Each change, along with the rationale for each change, is explained below.

CMM - 2016/01

Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area

(Tracked changes – Annex A; clean version – Annex F)

Paragraph	Change	Rationale
Preamble	Amend 'article' to Article Capitalise FURTHER NOTING, AWARE, COMMITTEE, DESIRING and ADOPTS Bold <i>adopts the following CMM...</i> Italicise 'adopts'	Consistent formatting across text of this CMM and with other CMMs adopted
6	Italicise <i>inter alia</i>	Consistent formatting across text of this CMM. Foreign words should be italicised.
9(1)	Delete "level" and "replace with bottom fishing effort and or catch,"	Consequential amendments made for clarity following changes agreed to by the MoP at SIOFA 3, and to ensure consistency with the terms used in subparagraphs 9(1)(a) and (b).

	9(1)(a) and 9(1)(b) insert “calendar” between the words “single” and “year”	To clarify the period of time agreed to by the MoP at SIOFA 3.
	Spell out <i>BFIA</i> in full	First use of the term Bottom Fishing Impact Assessment
12	12(b) Insert “or” 12(c) insert comma	Technical edit
14(a)	Delete “Bottom Fishing Impact Assessment” and replace with “BFIA” Delete “(BFIA)”	Acronym spelled out in paragraph 9 Text in brackets redundant.
15	Amend text as follows: the Scientific Committee shall consider all BFIA received <u>under paragraph 14(a)</u> at its ordinary meeting in 2018 <u>or, if the BFIA is submitted under paragraph 14(b), at the next ordinary meeting of the Scientific Committee</u>	This amendment addresses an unintentional oversight that rendered paragraphs 14(b) and 17(a) unoperational. The amendment enables these subparagraphs to be operational and ensures the SC has an obligation to review BFIA submitted after 2018 (ie submitted under 14(b))
17	Delete “sub”	Consistency in paragraph referencing
19(c)	Delete “an individual”	Text is now redundant
20	Amend text to read “...variance with the requirements of paragraph 9(1) shall submit to the Scientific Committee.” Clarify paragraph reference is paragraph 9(1) Delete “to limit the bottom fishing effort of vessels flying its flag”	Current text does not correctly reflect that paragraph 9(1) requires a limitation on catch or effort – “catch” is unintentionally absent. This is resolved through being clear that this process applies to any proposed fishing that is different to paragraph 9(1).
21	Delete “21”; replace with “20”	Paragraph reference corrected

	21(c) italicise 'inter alia' Replace 'vulnerable marine ecosystem' with VME	Consistent formatting across text of this CMM VME is abbreviated in paragraph 3(a)
27	Insert "the" and "CMM (CMM 2016/02)."	CMM reference inserted
30(a)	Insert "; and"	Technical edit
32 (b)	Insert CMM 2016/02	CMM reference inserted

CMM 2016/02

CMM for the Collection, Reporting, Verification and Exchange of Data relating to fishing activities in the Agreement Area

(Tracked changes – Annex B; clean version – Annex G)

Paragraph	Change	Rationale
Title	Amend "CMM" to "Conservation and Management Measure"	Consistent across CMM titles
Preamble	Capitalise RECALLING, FURTHER RECALLING, RECOGNISING, NOTING, CONSIDERING, NOTING, FURTHER NOTING and ADOPTS <i>Bold adopts the following conservation and management measure....</i> <i>Italicise 'adopts'</i>	Consistent formatting with other CMMs adopted

<p>19(b)</p>	<p>Amend footnote to read “and have” instead of “as has”</p>	<p>This amendment ensures it refers in this case to the electronic monitoring program that has been agreed, rather than a standard that has been agreed.</p>
<p>Annex B</p>	<p>Replace “incidental capture” with “incidental bycatch”</p> <p>Tag Recoveries – unbold “the following data shall...</p> <p>Start and End fishing: include definition of start/end fishing for bottom trawl and mid-water trawl</p> <p>For Dahn/Drop line fishing activity ONLY: include “handline”</p>	<p>Consequential amendment - consistency with adopted text of Annex A</p> <p>Formatting</p> <p>Consequential amendment - consistency with adopted text of Annex A</p> <p>Consequential amendment - consistency with adopted text of Annex A</p>

CMM 2016-03**Conservation and Management Measure for Data Confidentiality and Procedures for access and use of data***(Tracked changes – Annex C; clean version – Annex H)*

Paragraph	Change	Rationale
Preamble	Capitalise A for “Article” Capitalise ‘adopts’	Consistent formatting with other CMMs adopted
1	Spell out CNCP and PFE in full	First use of these terms
2(a) (ii)	Replace ‘fishing nation’ with “flag State”	For consistency with the rest of the CMM
2(c)	Amend bottom fishing measure reference to read “Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area (2016/01)”	Correct CMM title and reference
2(d)	Close quotation marks after “public domain catch and effort data” and complete bracket for 2(c)	Technical edit
2(e)	Replace “fine-scale” with “finer-scale” Replace “if” with “of”	Consistency with text agreed to by MoP Typographical error
2(f) – (g), 3(a) - (c)	Replace semi colon with full stop	Technical edit
3(b)	Replace “personnel” with “staff members”	Consistency in referencing with subparagraphs 3(a) and (c)

CMM 2016-04**Conservation and Management Measure on Vessels without Nationality***(Tracked changes – Annex D; clean version – Annex I)*

Paragraph	Change	Rationale
Preamble	<p>Insert “The Agreement”</p> <p>Capitalise “ADOPTS’</p> <p>Spell out CMM</p>	<p>Define the Agreement, consistent with approach taken in other CMMs</p> <p>Consistent formatting with this CMM and with other CMMs adopted.</p>
2	<p>Uncapitalise ‘c’ from ‘cooperating’</p> <p>Replace semi colon with full stop</p>	<p>Consistency with the term used in the Agreement</p> <p>Technical edit</p>
3	<p>Add ‘/s’ after ‘vessel’ so it reads ‘vessel/s’</p> <p>Replace semi colon with full stop</p>	<p>Insertion to recognise possibility there may be more than one vessel.</p> <p>Technical edit</p>

CMM 2016-05**Conservation and Management Measure regarding the use of large-scale pelagic driftnets and deepwater gillnets in the Southern Indian Ocean Fisheries Agreement Area***(Tracked changes – Annex E; clean version – Annex J)*

Paragraph	Change	Rationale
Title	Centre title	Consistent formatting with other CMMs adopted
4	Amend text to read “a State or fishing entity that becomes a Contracting Party, CNCP or PFE after this CMM enters into force...for that State, or their CNCP status of PFE status becomes effective” Delete last sentence	Amendment to ensure that fishing entities and CNCPs are captured. This language is consistent with the formulation in both the bottom fishing measure and in the authorisation and notification to fish CMM. Last sentence is repetitive

CMM 2016/01**Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area****Contracting Parties to the Southern Indian Ocean Fisheries Agreement;**

RECOGNISING that ~~A~~article 4(a) of the *Southern Indian Ocean Fisheries Agreement* (the Agreement) calls on the Contracting Parties, in giving effect to the duty to cooperate, to adopt measures on the basis of the best scientific evidence available to ensure the long-term conservation of fishery resources, taking into account the sustainable use of such resources and implementing an ecosystem approach to their management;

FURTHER RECOGNISING ~~A~~articles 4(c), (e) and (f) of the Agreement which call on the Contracting Parties to apply the precautionary approach, that fishing practices and management measures shall take due account of the need to minimise the harmful impact that fishing activities may have on the marine environment and noting that biodiversity in the marine environment shall be protected;

FURTHER RECOGNISING ~~A~~articles 6(1)(d) and (e) of the Agreement which provides that the Meeting of the Parties shall adopt conservation and management measures (CMMs) for ensuring the long-term sustainability of fishery resources, taking into account the need to protect marine biodiversity, based on the best scientific evidence and adopt generally recommended international minimum standards for the responsible conduct of fishing operations;

MINDFUL of Article 16 of the Agreement that calls on Contracting Parties, acting jointly under the Agreement, to cooperate closely with other international fisheries and related organisations in matters of mutual interest;

NOTING United Nations General Assembly (UNGA) Resolution 61/105 and subsequent resolutions of UNGA that call upon RFMOs to assess, on the basis of the best available scientific information, whether individual bottom fishing activities would have significant adverse impacts on vulnerable marine ecosystems (VMEs), and to ensure that if it is assessed that these activities would have significant adverse impacts, they are managed to prevent such impacts, or not authorised to proceed;

FURTHER NOTING UNGA Resolution 64/72 which calls upon RFMOs to establish and implement appropriate protocols for the implementation of UNGA Resolution 61/105, including definitions of what constitutes evidence of an encounter with a VME, in particular threshold levels and indicator species; and to implement the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas (FAO, 2009; FAO Deep-sea Fisheries Guidelines) in order to sustainably manage fish stocks and protect VMEs;

FURTHER NOTING ~~Further noting~~ UNGA Resolution 66/68 which encourages RFMOs to consider the results available from marine scientific research, including those obtained from seabed mapping programs concerning the identification of areas containing VMEs, and to adopt conservation and management measures to prevent significant adverse impacts from bottom fishing on such ecosystems, consistent with the FAO Deep-sea Fisheries Guidelines, or to close such areas to bottom fishing until such conservation and management measures are adopted, as well as to continue to undertake further marine scientific research, in accordance with international law as reflected in Part XIII of the United Nations Convention on the Law of the Sea;

~~Aware~~**AWARE** of the steps being taken by the Meeting of the Parties to address the impacts of large-scale pelagic drift nets and deepwater gillnets in the SIOFA Area of Application (the Agreement Area) through the adoption of CMM 2016/05;

~~Committed~~**COMMITTED** to ensuring that bottom fishing undertaken in the Agreement Area is consistent with the long-term sustainability of deep sea fish stocks and the protection of the marine environment; and

~~Desiring~~**DESIRING** to progress the development of a SIOFA-wide bottom fishing impact assessment and SIOFA-wide footprint, as recommended by the Scientific Committee at its first ordinary meeting in Fremantle, Australia, in March 2016;

~~Adopts~~**ADOPTS** the following CMM in accordance with Article 6 of the Agreement:

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Objective

1. The objective of this CMM is to promote the sustainable management of deep-sea fisheries resources in the Agreement Area, including target fish stocks and non-target species, and to protect the marine ecosystem, including *inter alia*, the prevention of significant adverse impacts on vulnerable marine ecosystems.

General provisions and definitions

2. This CMM applies to all fishing vessels flying the flag of a Contracting Party, cooperating non-Contracting Party (CNCP) or participating fishing entity (PFE) to the Agreement engaging or intending to engage in bottom fishing in the Agreement Area. A reference in this CMM to fishing and related activities of a Contracting Party, CNCP or PFE (such as *its* fishing, *its* catch or *its* effort) is taken to refer to fishing and related activities undertaken by vessels flying its flag.

3. The following definitions apply to this CMM:

- (a) 'vulnerable marine ecosystem' (VME) means a marine ecosystem identified using the criteria outlined in paragraph 42 of the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas (FAO, 2009; FAO Deep-sea Fisheries Guidelines).
- (b) 'bottom fishing' means fishing using any gear type likely to come in contact with the seafloor or benthic organisms during the normal course of operations.
- (c) 'SIOFA bottom fishing footprint' means a map of the spatial extent of historical bottom fishing in the Agreement Area, for all vessels flagged to all Contracting Parties, CNCPs and PFEs over a period to be defined by the Meeting of the Parties.
- (d) 'electronic observer program' means a program that uses electronic monitoring equipment in place of, or in conjunction with, a human observer or human observers on board a vessel that is capable of generating, storing and transmitting data to competent authorities.

4. The provisions of this CMM are not necessarily to be considered precedents for future allocation or other decisions in accordance with Articles 6(2),(3) and (4) of the Agreement relating to participation in bottom fisheries in the Agreement Area and adjacent areas of national jurisdiction, as appropriate.

Scientific Committee work on bottom fishing and subsequent consideration by the Meeting of the Parties

5. The Scientific Committee shall, by no later than the close of the ordinary meeting of the Scientific Committee in 2017, and thereafter whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop and provide advice and recommendations to the Meeting of the Parties on:

- (a) a SIOFA Bottom Fishing Impact Assessment Standard (BFIAS) which takes account of the latest scientific information available;
- (b) maps of where VMEs are known to occur, or likely to occur, in the Agreement Area;
- (c) guidelines for evaluating and approving electronic observer programs for scientific data collection for consideration by the Meeting of the Parties; and
- (d) standard protocols for future protected areas designation (areas which should be closed to fishing).

6. The Scientific Committee shall, by no later than the close of the ordinary meeting of the Scientific Committee in 2019, and thereafter whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop and provide advice and recommendations to the Meeting of the Parties on:

- (a) the status of stocks of principal deep-sea fishery resources targeted, and, to the extent possible, taken as bycatch and caught incidentally in these deep-sea fisheries, including straddling fishery resources;
- (b) criteria for what constitutes evidence of an encounter with a VME, in particular threshold levels and indicator species; and
- (c) the most appropriate response to a VME encounter, including *inter alia* closing particular areas to a particular gear type or types.

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7. The Scientific Committee shall, by no later than the close of the ordinary meeting of the Scientific Committee in 2020, and thereafter whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop and provide advice and recommendations to the Meeting of the Parties on:

- (a) an appropriate SIOFA bottom fishing footprint based on the data provided by Contracting Parties, CNCPs and PFEs to the Secretariat under paragraph 13; and
- (b) a SIOFA Bottom Fishing Impact Assessment (SIOFA BFIA). The SIOFA BFIA shall take into account the activities of all fishing vessels to which this CMM applies that, at the time the SIOFA BFIA is prepared, are engaged in, or intending to engage in, bottom fishing within the agreed SIOFA bottom fishing footprint.

8. Upon receipt of advice and recommendations from the Scientific Committee on the matters listed in paragraphs 5 to 7, the Meeting of the Parties shall act on the Scientific Committee's advice and recommendations at its next ordinary meeting. This may include, when the Meeting of the Parties considers it appropriate, to authorise any document or other output arising from the advice or recommendations, and amendments thereto.

Duties of Contracting Parties, CNCPs and PFEs undertaking bottom fishing activity in the Agreement Area*Interim bottom fishing measures*

9. (1) Until such time as the Meeting of the Parties has acted in accordance with paragraph 8 on the advice of the Scientific Committee provided in accordance with paragraph 7, each Contracting Party, CNCP and PFE shall, unless otherwise approved by the Meeting of the Parties, establish and apply specific measures to limit the level-bottom fishing effort and/or catch, and spatial extent of the bottom fishing effort of vessels flying their flag. In particular, such measures shall include:

- (a) for Contracting Parties, CNCPs or PFEs that have fished more than 40 days in a single calendar year, in the Agreement Area, at the time this CMM was adopted:
 - i. limits on its bottom fishing effort and/or catch, over a 12 month period to its average annual level in active years over a representative period for which reliable data exists;
 - ii. constraints on the spatial distribution of its bottom fishing effort, excluding line and trap methods, to recently fished areas to prevent any expansion of such fishing activities;
 - iii. provisions to ensure its bottom fishing will not have significant adverse impacts on VMEs and, where applicable, shall take into account its Bottom Fishing Impact Assessment (BFIA) prepared and submitted pursuant to paragraph 14, and any areas identified under paragraph 35 where VMEs are known to occur, or are likely to occur; and
 - iv. provisions ensuring that any vessel flying its flag is not authorised to fish in any areas that the Meeting of the Parties has decided to close to fishing.

- (b) for Contracting Parties, CNCPs or PFEs that have not fished more than 40 days in a single calendar year, in the Agreement Area, at the time this CMM was adopted:
 - i. limits on its bottom fishing effort and/or catch, and spatial distribution, as disclosed to the Meeting of the Parties in accordance with paragraph 9(2); and
 - ii. provisions as referred to in subparagraphs 9(1)(a)(iii) and (iv).

(2) The measures established by Contracting Parties, CNCPs and PFEs pursuant to this paragraph shall be disclosed to the next ordinary Meeting of the Parties following the entry into force of this CMM, and shall be made publicly available on the SIOFA website, by the Secretariat, once the website has been developed.¹

(3) Contracting Parties, CNCPs and PFEs may revise the measures they establish pursuant to this paragraph provided that any amendments made are consistent with the requirements of paragraph 9(1). Revised measures shall be notified to the Secretariat within 30 days of the amendment, and shall be disclosed at the next ordinary Meeting of the Parties.

¹ Until such time as the website is developed, this information will be made available upon request to the Secretariat.

(4) The provisions of this paragraph are not necessarily to be considered a precedent for future decisions taken by the Meeting of the Parties pursuant to paragraph 8.

10. Any Contracting Party, CNCP or PFE that has not submitted the measures required pursuant to paragraph 9(1), shall not authorise any vessels flying its flag to bottom fish in the Agreement Area until:

- (a) that Contracting Party, CNCP or PFE has submitted the measures required in paragraph 9(1); or
- (b) it has otherwise been decided by the Meeting of the Parties.

11. Until the Meeting of the Parties has acted on the Scientific Committee's advice on SIOFA threshold levels pursuant to paragraph 6(b), Contracting Parties, CNCPs and PFEs shall establish and apply to vessels flying their flag threshold levels for encounters with VMEs, taking into account paragraph 68 of the FAO Deep-sea Fisheries Guidelines. These threshold levels shall be disclosed in the measures referred to in paragraph 9(1).

12. Until the Meeting of the Parties has acted on the Scientific Committee's advice on the most appropriate response to a VME encounter pursuant to paragraph 6(c), Contracting Parties, CNCPs and PFEs shall require any vessel flying their flag to cease bottom fishing activities within:

- (a) For bottom or mid water trawling, or fishing with any other net - two (2) nautical miles either side of a trawl track extended by two (2) nautical miles at each end;
- (b) For longline and trap activities - a radius of one (1) nautical mile from the midpoint of the line segment;² or
- (c) For all other bottom fishing gear types - a radius of one (1) nautical mile from the midpoint of the operation.

where evidence of a VME is encountered above threshold levels established under paragraph 11 in the course of fishing operations. Contracting Parties, CNCPs and PFEs shall report any such encounter in their National Reports to the Scientific Committee in accordance with the guidelines at Annex 1, including any action taken by that Contracting Party, CNCP or PFE in respect of the relevant site.

Provision of data by Contracting Parties, CNCPs and PFEs

13. Contracting Parties, CNCPs and PFEs shall, at least 30 days prior to the commencement of the ordinary meeting of the Scientific Committee in 2018, submit to the Secretariat:

- (a) relevant data on the spatial extent of its historical bottom fishing effort in the Agreement Area expressed as grid blocks of at least 20 minute resolution or, if available, a finer scale; and
- (b) any other data the Scientific Committee may consider to be useful in developing the SIOFA BFIA referred to in paragraph 7(b), including data relating to recorded encounters with VMEs or indicators of VMEs.

14. (a) Any Contracting Party, CNCP or PFE that authorises or is seeking to authorise any vessel flying its flag to bottom fish in the Agreement Area shall, at least 30 days prior to the

² Line segment means a 1000 hook section of line or a 1200 metre section of line, whichever is the shorter, and for pot lines a 1200 metre section

commencement of the ordinary meeting of the Scientific Committee in 2018, submit to the Secretariat a ~~Bottom Fishing Impact Assessment~~ BFIA for its individual bottom fishing activities in the Agreement Area that, to the extent possible, accords with paragraph 18 ~~(BFIA)~~. Any Contracting Party, CNCP and PFE that has prepared, or prepares, a BFIA prior to this CMM entering into force is encouraged to submit this BFIA to the Scientific Committee as soon as possible.

(b) Any Contracting Party, CNCP or PFE that has not submitted a BFIA pursuant to subparagraph (a) may, at least 30 days prior to the commencement of any subsequent ordinary meeting of the Scientific Committee and before the Meeting of the Parties has authorised the SIOFA bottom fishing footprint and the SIOFA BFIA developed by the Scientific Committee in accordance with paragraph 7, submit to the Secretariat a BFIA.

15. The Scientific Committee shall consider all BFIA received under paragraph 14(a) at its ordinary meeting in 2018 or, if the BFIA is submitted under paragraph 14(b), at the next ordinary meeting of the Scientific Committee, and provide advice in its meeting report as to:

- (a) the likely cumulative impacts of bottom fishing impact activity from vessels flying the flag of a CP, CNCP or PFE in the Agreement Area; and
- (b) whether each BFIA meets an appropriate standard in light of international standards and the SIOFA BFIA, where applicable.

16. If the Scientific Committee's advice is that a BFIA does not meet an appropriate standard, the Meeting of the Parties may request that Contracting Party, CNCP or PFE who submitted the BFIA to revise and resubmit its BFIA to the next ordinary meeting of the Scientific Committee, and make a decision to either:

- (c) suspend any vessel flying the flag of that Contracting Party, CNCP or PFE from bottom fishing in the Agreement Area until the Scientific Committee provides advice that the BFIA meets an appropriate standard; or
- (d) undertake any other course of action, as the Meeting of the Parties may decide, taking into account Scientific Committee advice and the objectives of this CMM.

17. Any Contracting Party, CNCP or PFE that has not submitted a BFIA in accordance with ~~sub~~paragraph 14 shall not authorise any vessels flying its flag to bottom fish in the Agreement Area until:

- (a) that Contracting Party, CNCP or PFE has prepared a BFIA, and the Scientific Committee has reviewed that BFIA in accordance with paragraph 15; or
- (b) the Meeting of the Parties has authorised the SIOFA bottom fishing footprint and the SIOFA BFIA developed by the Scientific Committee in accordance with paragraph 7; or
- (c) it has otherwise been decided by the Meeting of the Parties.

18. All BFIA, including the SIOFA BFIA, shall:

- (a) be prepared, to the extent possible, in accordance with the FAO Deep-sea Fisheries Guidelines;
- (b) meet the standards of the SIOFA BFIA (if the BFIA is prepared after the Meeting of the Parties has adopted the BFIA);
- (c) take into account areas identified where VMEs are known or are likely to occur in the area to be fished;

- (d) take into account all relevant information provided pursuant to paragraphs 13 and 35, and in addition, for the SIOFA BFIA, paragraph 14;
- (e) be updated when a substantial change in the fishery has occurred, such that it is likely that the risk or impacts of the fishery may have changed;
- (f) assess, to the extent possible, the historical and anticipated cumulative impact of all bottom fishing activity in the Agreement Area, if applicable;
- (g) address whether the proposed activities achieve the objectives described in paragraph 1 of this CMM and Article 2 of the Agreement; and
- (h) be made publicly available on the SIOFA website, once developed.

Provision of data by, and interim bottom fishing measures for, new Contracting Parties, CNCPs and PFEs

19. Paragraphs 9 to 12 shall apply, *mutatis mutandis*, and with the modified timeframes set out in this paragraph, to any State or fishing entity that becomes a Contracting Party, CNCP or PFE after this CMM is adopted. This includes the ability of the Meeting of the Parties to otherwise approve interim bottom fishing measures. Each of these new Contracting Parties, CNCPs and PFEs shall:

- (a) prior to authorising any vessels flying its flag to bottom fish in the Agreement Area, advise the Meeting of the Parties of the measures it intends to take pursuant to paragraph 9(1);
- (b) 30 days prior to the first ordinary meeting of the Scientific Committee after it becomes a Contracting Party, CNCP or PFE, submit the data referred to in paragraph 13 to the Scientific Committee;
- (c) 30 days prior to the second ordinary meeting of the Scientific Committee after it becomes a Contracting Party, CNCP or PFE, submit to the Scientific Committee, if it authorises or is seeking to authorise any vessel flying its flag to bottom fish in the Agreement Area, ~~an individual~~ BFIA, as outlined in paragraph 14.

Proposals to bottom fish in the Agreement Area in a manner at variance with Established Measures

20. A Contracting Party, CNCP or PFE seeking to authorise any vessel flying its flag to undertake bottom fishing in the Agreement Area in a manner at variance with the requirements of paragraph 9 ~~(1) to limit the bottom fishing effort of vessels flying its flag~~ shall submit to the Scientific Committee, at least 30 days prior to an ordinary meeting of the Scientific Committee, a proposal to undertake that activity or activities. This proposal shall include an assessment of the impact of the proposed fishing activity in accordance with the requirements for BFIA's outlined in paragraph 18, any proposed measures to mitigate that impact, and any other information as required by the Scientific Committee to undertake the assessment in paragraph 21.

21. On receipt of any proposal developed pursuant to paragraph ~~21~~²⁰, the Scientific Committee shall, at its next ordinary meeting:

- (a) assess, on the basis of the best available scientific information, whether the proposed bottom fishing would have significant adverse impacts on VMEs;

- (b) if it is assessed that these activities would have significant adverse impacts, consider what measures should be taken to prevent such impacts, or, if those impacts cannot be appropriately mitigated, whether the proposed bottom fishing should proceed or not;
- (c) assess, taking into account, *inter alia*: the cumulative impacts of other fishing occurring in that area, where such information is available; whether the proposed activities are compatible with the sustainable management of bottom fisheries, including target fish stocks and non-target species; and the protection of the marine environment, including *inter alia*, the prevention of significant adverse impacts on ~~vulnerable marine ecosystems~~VMEs; and
- (d) provide recommendations and advice to the Meeting of the Parties in its meeting report on each of these matters, as applicable.

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22. The Meeting of the Parties shall, taking into account the recommendations and advice of the Scientific Committee, decide whether or not to authorise bottom fishing in accordance with a proposal made pursuant to paragraph 20 including, if applicable, the extent to which such bottom fishing shall be authorised.

23. If applicable, the Meeting of the Parties shall also decide which measures or conditions shall be applied to any activity authorised pursuant to paragraph 22 to ensure that fishing activity is consistent with the objectives of Article 2 of the Agreement and paragraph 1 of this CMM.

General management and conditions for bottom fishing in the Agreement Area

24. Consistently with Article 11(1)(a) of the Agreement, Contracting Parties, CNCPs and PFEs shall only authorise vessels flying their flag to bottom fish in the Agreement Area in accordance with the provisions of the Agreement, this CMM and all other applicable CMMs, and shall ensure that such vessels do not engage in any activity which undermines the effectiveness of these measures.

25. All Contracting Parties, CNCPs and PFEs shall ensure that all vessels flying its flag that participate in bottom fishing in the Agreement Area are equipped and configured to comply with all relevant CMMs.

26. Consistently with Article 11(3)(a) of the Agreement, Contracting Parties, CNCPs and PFEs shall only authorise vessels flying their flag to bottom fish in the Agreement Area where they are able to exercise their responsibilities as a flag State under the Agreement and all CMMs.

27. Contracting Parties, CNCPs and PFEs shall ensure that vessels flying their flag provide the minimum required data to the Secretariat in accordance with ~~the~~ SIOFA data standards ~~CMM (CMM 2016/02)~~.

28. Nothing in this CMM shall affect the rights of a Contracting Party, CNCP or PFE to apply additional or more stringent compatible measures to vessels flying their flag that are conducting bottom fishing.

29. Nothing in this CMM exempts a Contracting Party, CNCP or PFE from complying with any other obligations in the Agreement or any CMMs adopted by the Meeting of the Parties.

Scientific observer coverage

30. Each Contracting Party, CNCP and PFE shall ensure that any vessel flying its flag and undertaking bottom fishing in the Agreement Area:

- (a) using trawl gear has 100 percent scientific observer coverage for the duration of the trip;³ and
- (b) using any other bottom fishing gear type has 20 percent scientific observer coverage in any fishing year.

31. Consistent with paragraph 13 of the SIOFA Data Standards CMM (CMM 2016/02), the Scientific Committee shall review the observer coverage levels prescribed in paragraph 30 at its ordinary meeting in 2018 and provide advice to the Meeting of the Parties thereon.

32. (a) The scientific observer coverage levels outlined in paragraph 30 shall be fulfilled through the use of human observers, except to the extent authorised by the Meeting of the Parties pursuant to subparagraph (c)(iii).

(b), Once the Meeting of the Parties has adopted Guidelines for evaluating and approving electronic observer programs developed pursuant to paragraph 5(c), a Contracting Party, CNCP or PFE may submit a proposal to the Scientific Committee seeking to use an electronic observer program which uses, entirely or in part, electronic monitoring equipment, human observers and/or a port sampling program. As part of this proposal, that Contracting Party, CNCP or PFE shall submit evidence of, and data relating to, a statistically robust trial of the program that demonstrates it meets the data requirements prescribed in the SIOFA data standards CMM (CMM 2016/02), once adopted by the Meeting of the Parties.

(c) Following the submission of the proposal by the Contracting Party, CNCP or PFE to the Scientific Committee:

- i. The Scientific Committee shall review the proposal and provide recommendations and advice thereon to the Meeting of the Parties, taking into account the Guidelines and whether the program will reliably collect all data required by the SIOFA data standards CMM, once adopted by the Meeting of the Parties.
- ii. The Compliance Committee shall also review the proposal and provide advice and recommendations thereon to the Meeting of the Parties.
- iii. On receipt of the advice by the Scientific Committee and the Compliance Committee on the proposal, the Meeting of the Parties shall, at its next meeting, consider whether to authorise the use of that program by that Contracting Party, CNCP or PFE in place of the exclusive use of human observers.

Position Reporting

33. Each Contracting Party, CNCP and PFE 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.

Vulnerable Marine Ecosystem closures

34. Where the Meeting of the Parties, taking into account advice provided by the Scientific Committee, determines that bottom fishing may have significant adverse impacts on VMEs in

³ This provision shall enter into force for Japan on 1 January 2017 and for the Cook Islands on 1 June 2017. These Contracting Parties will take all necessary steps towards implementing this provision in the interim.

areas where VMEs are known to occur, or are likely to occur, based on the best available scientific information, the Meeting of the Parties may take a decision to close such areas to bottom fishing, either entirely or with respect to bottom fishing by a particular gear type or types.

35. The Meeting of the Parties shall cooperate to identify, on the basis of the best available scientific information including advice and recommendations provided by the Scientific Committee pursuant to paragraph 5(b), areas where VMEs are known or likely to occur in the Agreement Area and to map these sites, and provide such data and information to all Contracting Parties, CNCs and PFEs for circulation.

36. The Meeting of the Parties recommends that all Contracting Parties note the advice from the first meeting of the Scientific Committee in relation to Benthic Protected Areas.

Cooperation with other States

37. Contracting Parties resolve, individually or jointly, to request those States and fishing entities that are undertaking bottom fishing in the Agreement Area but are not currently Contracting Parties, CNCs or PFEs to cooperate fully in the implementation of this measure and to consider participating in the work of SIOFA as a matter of priority.

Review

38. This CMM shall be reviewed no later than at the ordinary Meeting of the Parties in 2019. This review shall take into account, *inter alia*, the latest advice of the Scientific Committee, including advice on those matters listed in paragraphs 5 to 7 and appropriate catch levels for principal target species, in accordance with the objective described in paragraph 1.

Annex 1 - Guidelines for the Preparation and Submission of Notifications of Encounters with VMEs

1. General Information

Include contact information, nationality, vessel name(s) and dates of data collection.

2. VME location

Start and end positions of all gear deployments and/or observations.
Maps of fishing locations, underlying bathymetry or habitat and spatial scale of fishing.
Depth(s) fished.

3. Fishing gear

Indicate fishing gears used at each location.

4. Additional data collected

Indicate additional data collected at or near the locations fished, if possible.
Data such as multibeam bathymetry, oceanographic data such as CTD profiles, current profiles, water chemistry, substrate types recorded at or near those locations, other fauna observed, video recordings, acoustic profiles etc.

5. VME taxa

For each station fished, provide details of VME taxa observed, including but not limited to their relative density, absolute density, or weight and/or number of taxa.

CMM 2016/02

Conservation and Management Measure for the Collection, Reporting, Verification and Exchange of Data relating to fishing activities in the Agreement Area***Contracting Parties to the Southern Indian Ocean Fisheries Agreement:***

~~Recalling-RECALLING~~ that Article 6(1) (f) of the *Southern Indian Ocean Fisheries Agreement* (the Agreement) calls on the Meeting of the Parties to develop rules for the collection and verification of scientific and statistical data, as well as for the submission, publication, dissemination and use of such data;

~~Further-FURTHER RECALLING recalling~~ that Articles 10(1)(c) and 11(3) set out the duties relevant to the collection and provision of data and related processes for Contracting Parties and Flag States respectively;

~~Recognising-RECOGNISING~~ the importance of developing comprehensive arrangements for data collection, reporting, verification and exchange of data to assist the Scientific Committee in performing its functions as outlined in Article 7 of the Agreement;

~~Noting-NOTING~~ the relevance of Articles 10(e) and 14 of the *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (UNFSA) which call on States to cooperate through regional fisheries management organisations to agree on the standards for the collection, reporting, verification and exchange of data on fisheries for the stocks, and the specifications and format for the data to be provided and to cooperate in their scientific research;

~~Considering-CONSIDERING~~ the provisions set forth in the *Resolution on data collection concerning the high seas in the Southern Indian Ocean*, adopted by the Conference on the Southern Indian Ocean Fisheries Agreement in the Seychelles from 13-16 July 2004;

~~NOTING Noting~~ the importance of data collection and catch reporting for the purposes of ensuring scientific stock assessment and implementing an ecosystem approach to fisheries management; and

~~Further-FURTHER NOTING noting~~ that the Meeting of Parties has adopted policies and procedures for the maintenance of data confidentiality (CMM 2016/03);

~~Adopts-ADOPTS~~ the following conservation and management measure (CMM) in accordance with Article 6 of the Agreement:

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Application

1. This CMM applies to all Contracting Parties, cooperating non-Contracting Parties (CNCPs) and Participating Fishing Entities (PFEs).
2. This CMM prescribes the standards for the collection, reporting, verification and exchange of data related to fishing activities by vessels fishing in the SIOFA Area of Application (the Agreement Area) that are flying the flag of a Contracting Party, CNCP or PFE. These data standards shall assist the Meeting of the Parties to fulfil its objectives under the Agreement insofar as it relates to assessing the state of the fisheries within SIOFA's competence,

including the status of target and non-target species and the impact of fishing on the marine environment.

Terminology

3. The following definitions apply to this CMM including its annexes:
 - a. 'other species of concern' means those species as may be defined by the Scientific Committee from time to time.
 - b. 'National Report' means the report defined in paragraph 8 of this CMM.

Vessel Catch and Effort Data

Collection of data

4. Contracting Parties, CNCs and PFEs shall ensure that data on fishing activities, including for target, non-target and associated and dependent species such as marine mammals, marine reptiles, seabirds or 'other species of concern', are collected from vessels flying their flag that are fishing in the Agreement Area in accordance with the relevant sections of Annex A.
5. The Scientific Committee shall, by no later than the ordinary meeting of the Scientific Committee in 2017, provide advice and recommendations to the Meeting of the Parties on an appropriate spatial resolution for the collection and reporting of data to facilitate effective stock assessment. Until the Meeting of the Parties, based on the advice of the Scientific Committee, determines an appropriate spatial resolution for the collection and reporting of data, Contracting Parties, CNCs and PFEs shall ensure that data are collected on a haul by haul basis.

Data collection and submission

6. Contracting Parties, CNCs and PFEs shall report to the Secretariat, by 31 May each year, the data collected under paragraphs 4 and 5 for the previous calendar year, in accordance with the format prescribed in the corresponding annexes.
7. Contracting Parties, CNCs and PFEs shall provide to the Secretariat, by 31 May each year, annual catch summaries for all species/groups caught in the Agreement Area during the previous calendar year. The catch summaries shall include the following information:
 - a. Calendar year (eg 2015)
 - b. FAO statistical area (eg FAO87)
 - c. Species/group name (common name and scientific name)
 - d. Species/group code (FAO3-alpha code 19, EG ORY) (if available)
 - e. Annual catch total – tonnes raised to 'live' weight.

National report

8. Following the entry into force of this CMM, Contracting Parties, CNCs and PFEs shall provide to the Scientific Committee, at least 30 days prior to the commencement of each

ordinary meeting, an annual National Report of their fishing, research and management activities in accordance with the following:

- a. For the first report: the National Report shall include details of activities of the previous five calendar years;
- b. For all reports thereafter: the National Report shall include details of activities of the previous calendar year; and
- c. In either case, the National Report shall take into account the guidelines prepared by the Scientific Committee for the preparation of such reports.

Historical Data

9. To assist with the development of a bottom fishing footprint and stock assessments, Contracting Parties, CNCPs and PFEs shall provide to the Secretariat, by 31 January 2017,¹ historical catch, effort and, if available, observer data from vessels flying their flag that were fishing in the Agreement Area at any time during the period 2000 to 2015, and any previous years where available, in a format as close as is possible to the annexes to this CMM. The catch, effort and, if available, observer data provided to the Secretariat may initially be provided as unverified data, and updated with verified data any time before 31 January 2018. Any State or fishing entity that becomes a Party to the Agreement, a CNCP or PFE after the date this CMM is adopted shall provide their historical data to the Secretariat within 12 months of becoming Party to the Agreement, or becoming a CNCP or PFE.
10. Where possible, Contracting Parties, CNCPs and PFEs are encouraged to provide relevant, reliable historical data for species caught in waters under their national jurisdiction where such information would assist in understanding the status of the stocks and the impacts of fishing on all target species, non-target and associated and dependent species and the marine environment within the Agreement Area.

Scientific Observer Data

11. All Contracting Parties, CNCPs and PFEs shall implement national scientific observer programmes to collect from activities undertaken by vessels flying their flag:
 - a. Vessel information, effort and catch data for its fishing activities in the Agreement Area, including target, non-target and associated and dependent species including marine mammals, marine reptiles, seabirds or 'other species of concern';
 - b. Biological or other data and information relevant to the management of fishery resources in the Agreement Area, as specified in this CMM, or as identified from time to time by the Scientific Committee or through processes identified by the Meeting of the Parties; and
 - c. Relevant scientific information related to the implementation of the provisions of the CMMs adopted by the Meeting of the Parties.
12. Contracting Parties, CNCPs and PFEs shall, through their National Report, provide to the Scientific Committee an annual observer programme implementation report which should

¹ If the SIOFA database is not established by this time, Contracting Parties, CNCPs and PFEs shall provide a comprehensive data summary to the ordinary meeting of the Scientific Committee in 2017.

include sections covering: observer training, programme design and coverage, type of data collected, and any problems encountered during the previous calendar year.

13. Contracting Parties, CNCs and PFEs shall endeavour, for all observed trips, to collect observer data in accordance with the relevant sections of Annex B. All observer data collected by Contracting Parties, CNCs and PFEs shall be reported to the Secretariat by 31 May each year for the previous calendar year. Annex B will be reviewed by the Scientific Committee at its ordinary meeting in 2018 based on observer data provided.

Vessel Monitoring System Data

Implementation of Vessel Monitoring System

14. Contracting Parties, CNCs and PFEs shall ensure that all vessels flying their flag that are fishing in the Agreement Area are fitted with operational automatic location communicator (ALC) reporting back to the flag State.
15. Contracting Parties, CNCs and PFEs shall ensure that ALC units on vessels flying their flag remain operational at all times while in the Agreement Area.
16. Contracting Parties, CNCs and PFEs shall develop, implement and improve systems to maintain a record of all vessel position information reported through VMS systems and logbooks, in relation to vessels flying their flags while these vessels are in the Agreement Area, such that this information may be used to document vessel activity in the Agreement Area, and to validate fishing position information provided by those vessels.
17. Contracting Parties, CNCs and PFEs are encouraged to share VMS data where it is requested from another Contracting Party, CNC or PFEs in support of patrol or surveillance activities.

Frequency and accuracy of position reporting

18. Contracting Parties, CNCs and PFEs shall ensure that:
 - a. VMS position reports are transmitted from each vessel flying their flag:
 - i. at least once every 2 hours if fishing using trawling methods or if within 20nm of an exclusive economic zone boundary; or
 - ii. at least once every four hours in other circumstances.
 - b. Under normal satellite navigation operating conditions, positions derived from the data reported shall be accurate to within 100m; and
 - c. VMS position reports include at least the following information:

Category	Data	Remarks
Vessel information	Static unique	For example, FAO 3 alpha or 2 alpha, country code followed by national vessel registration number

Activity detail	Latitude	Position latitude (decimal degrees, to the nearest 0.01 degrees)
	Longitude	Position longitude (decimal degrees, to the nearest 0.01 degrees)
Message	Date	Position date (UTC)
	Time	Position time (UTC)

Data Verification

19. Contracting Parties, CNCPs and PFEs shall:

- a. ensure that fishery data are verified through an appropriate system of data verification mechanisms;
- b. develop, implement and improve data verification mechanisms, which may include:
 - i. Position verification through vessel monitoring systems;
 - ii. Independent monitoring, including scientific observer programs and approved electronic observer programs,² to verify industry data on catch, effort, catch composition (target and non-target), discards and other details of fishing operations;
 - iii. Vessel trip, landing and transshipment reports; and
 - iv. Port sampling.
- c. provide to the Scientific Committee, through their National Report, an annual data verification report which should provide information regarding their development and implementation of data verification mechanisms.

Format for data submission

20. Contracting Parties, CNCPs and PFEs shall report all data required to be reported by this measure to the Secretariat in accordance with the formats described in this CMM, including its annexes.

21. Specifications for the submission of data:

- a. times, longitudinal/latitudinal information and units of measure are to be reported in accordance with the format described in Annex C;
- b. Species are to be described using the FAO 3 letter Species Codes;³
- c. Fishing methods are to be described using the International Standard Classification of Fishing Gear (ISSCFG - 29 July 1980) codes;⁴ and
- d. Types of fishing vessels are to be described using the International Standard Classification of Fishery Vessels (ISSCFV) codes.⁵

² Approved electronic observer programs refers to those programs that meet the SIOFA agreed standard ~~as~~ ~~has~~ and have been reviewed by the Scientific Committee and approved by the Meeting of the Parties as being capable of meeting the data requirements in this CMM.

³ www.fao.org/fi/statist/fisoft/asfis/asfis.asp

⁴ <http://www.fao.org/fishery/cwp/handbook/M>

⁵ <http://www.fao.org/fishery/cwp/handbook/L>

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ANNEX B

Review

22. This CMM should be reviewed periodically by the Scientific Committee and the Meeting of the Parties, taking into account new information or data requirements as may be decided.

**Standards for the Collection, Reporting, Verification and Exchange of Data
Annexes**

List of Annexes:

Annex A - Vessel Catch and Effort Data

Annex B – Voluntary Observer Data

Annex C - Specifications for the Exchange of Data

Vessel Catch and Effort Data

1. Contracting Parties, CNCPs and PFEs shall ensure that the following data on fishing activities are collected from all fishing vessels flying their flag in the Agreement Area:

Data Set – Fishing activities
<p>General (Trip) Vessel flag State (ISO 3-apha) Name of vessel International radio call sign (if any) Vessel Registration number (flag State) Lloyd's / IMO /IHS Fairplay Number (if allocated) Vessel size: Gross Tonnage (Gross register tonnage may be used if GT is not available, or both) Name of person filling in the data</p>
<p>Weight Conversion Factor Species Processing type Conversion factor = live weight/processed weight</p>
<p>Haul Information Intended Target species (FAO code) Type of fishing (C)ommercial; (R)esearch; (S)urvey data Haul ID number</p>
<p>Set Start date and Time (Based on Coordinated Universal Time (UTC)) Recorded at start and end of fishing For longline vessels - record at start and end of setting, in addition to start and end of haul Date format (YYYY.MON.DD) Time format (hh.mm) Decimal degrees (WGS84 are to be used to describe locations)</p>
<p>Position at start and end of fishing Latitude Longitude Use N and S rather than + and – Use E and W rather than + and – For longline vessels – position is recorded at the start and end of setting For Trawl fishing – for bottom trawl “start” is defined as when the groundrope is on the bottom, “end” is when the tow ends. – for midwater trawl “start” is defined as when the fishing gear is at target fishing depth, “end” is when the tow ends.</p>
<p>Bottom Depth (m) As recorded at the start and end of fishing</p>
<p>Fishing / gear depth (m) As recorded at the start and end of fishing For trapping/potting, Actual Fishing / gear depth (m) as recorded at start is required</p>
<p>Species retained Estimated catch retained on board by species (FAO species/group code/scientific name) in live weight (kg)</p>

<p>Species Discarded An estimation of the amount of living marine resources discarded by species if possible in live weight (kg)</p>
<p>Incidental bycatch of marine mammals, seabirds, reptiles and 'other species of concern' Yes / No For each species caught</p> <ul style="list-style-type: none"> • Species name • Number alive • Number dead or injured

2. Contracting Parties, CNCPs and PFEs shall ensure that the following gear-specific data on fishing activities, as applicable, are collected from all fishing vessels flying their flag in the Agreement Area.

Data Set - Gear
<p>Trawl Mesh Size (mm) Trawl technique: Type of trawl: (S)ingle, (D)ouble or (T)riple</p>
<p>Longline Type of longline (Spanish, Trotline, Autoline) Type of bait Hook size (mm) Hook spacing (m) Hook code or make Length of line (m) Number of hooks set Number hooks per cluster (if Trotline) Number of hooks lost (attached to lost sections of line)</p>
<p>Trap/Pot Pot type Type of line: Dropline or longline Length of line (m) Pot spacing (m) Number of pots set Number of pots lost Type of bait</p>
<p>Dahn/Drop Line/ Handline Total number of hooks in the set Number of hooks lost Hook code or make Type of leader used Total number of line lifts in the set Type of bait used</p>

Voluntary Observer Data

1. Contracting Parties, CNCPs and PFEs shall endeavour, for all observed trips, to collect and provide to the Secretariat the data contained in this Annex in accordance with the format set out below.
2. Contracting Parties, CNCPs and PFEs shall, where appropriate, ensure that observers are briefed and provided with documented length-frequency and biological sampling protocols and the specific priorities for the trip for the sampling activities documented below.
3. Contracting Parties, CNCPs and PFEs shall endeavor to collect tissue, otolith and/or stomach samples in accordance with any research programs developed by the Scientific Committee.

Data Set – Observer data
<p>Trip Details</p> <p>Trip Number Cruise details (start and end dates – YYYY.MON.DD) Date report is generated (UTC) Current vessel flag State (ISO 3-apha) Name of vessel</p>
<p>Observer Details</p> <p>Observer name and ID Nationality (ISO 3-apha) Employing organisation Contact name in organisation (Address/email/fax) Boarding location (UNLOCODE, if applicable or Latitude/Longitude) Boarding Date (UTC:YYYY.MON.DD) Disembarkation location (UNLOCODE, if applicable or Latitude/Longitude) Disembarkation date (UTC:YYYY.MON.DD) Time Zone (UTC +/-)</p>
<p>Length Frequency Data</p> <p>Representative and randomly sampled length-frequency data shall be collected for the target species (FAO species code) Where possible, representative and randomly sampled length-frequency data shall be collected for other main by-catch species. Length data shall be collected and recorded at the most precise level appropriate for the species (cm or mm and whether to the nearest unit or unit below) and the type of measurement used (total length, fork length, or standard length) shall also be recorded. Where possible, total weight of length-frequency samples should be recorded, or estimated and the method of estimation recorded Where possible, Observers should determine and record sex of measured fish to generate</p>

length-frequency data stratified by sex
<p>Biological Sampling</p> <p>Species</p> <p>Length (mm or cm), with record of the type of length measurement used.</p> <p>Skates and rays:</p> <ul style="list-style-type: none"> • maximum disk width shall be measured <p>Sharks</p> <ul style="list-style-type: none"> • Appropriate length measurement to be used should be selected for each species. As a default, total length should be measured. <p>Weight (kg)</p> <p>Sex (male, female, immature, unsexed)</p> <p>Maturity stage (and criteria/schedule used)</p> <p>Gonad weight (g)</p> <p>Otoliths</p>
<p>Incidental <u>capture-bycatch</u> of seabirds, mammals turtles or ‘other species of concern’</p> <p>The following data shall be collected for all seabirds, mammals, turtles and other species of concern caught in fishing operations:</p> <ul style="list-style-type: none"> • Species (identified taxonomically as far as possible, or accompanied by photographs if identification is difficult) and size • Estimated species abundance around fishing vessel • Species interactions with fishing gear • Count of the number of each species caught per tow or set • Fate of bycatch animal(s) (retained or released/discarded) • If released, life status (vigorous, alive, lethargic, injured, dead) upon release • If injured, what was the cause of injury? • If dead, then collect information or samples for onshore identification in accordance with pre-determined sampling protocols. Where this is not possible, observers may be required to collect sub-samples of identifying parts, as specified in biological sampling protocols <ul style="list-style-type: none"> ◦ Record the type of interaction (hook/line entanglement/warp strike/net capture/other) if other, describe • Sex of each individual for taxa where this is feasible from external observation, e.g. pinnipeds, small cetaceans or Elasmobranchii species • identify any circumstances or actions that may have contributed to the bycatch event? (E.g. tori line tangle, high levels of bait loss)
<p>Tag Recoveries</p> <p>The following data shall be collected for all recovered fish, seabird, mammal or reptile tags if the organism is dead, to be retained, or alive:</p> <ul style="list-style-type: none"> • Name of observer • Name of vessel • International radio call sign (if any) • Vessel flag State (ISO 3-apha) • Collect, label (with all details below) and store the actual tags for later return to the tagging agency • Species from which tag recovered • Tag colour and type (spaghetti, archival)

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<ul style="list-style-type: none"> • Tag numbers • Date and time of capture (UTC) • Location of capture (Lat/Lon, to the nearest 1 minute) • Animal length / size (cm or mm) with description of what measurement was taken (such as total length, fork length, etc) • Sex (F=female, M=male, I=indeterminate, D=not examined) • Whether the tags were found during a period of fishing that was being observed (Y/N)
<p>Hierarchies for Observer Data collection</p> <p>Fishing Operation Information All vessel and tow / set / effort information.</p> <p>Reporting of Catches Record time, weight of catch sampled versus total catch or effort (e.g. number of hooks), and total numbers of each species caught Identification and counts of seabirds, mammals, reptiles (e.g. turtles), sensitive benthic species and vulnerable species Record numbers or weights of each species retained or discarded Record instances of depredation, where appropriate</p> <p>Biological Sampling Check for presence of tags Length-frequency data for Target species (FAO species code) Basic biological data (sex, maturity) for Target species (FAO species code) Length-frequency data for main by-catch species Otoliths (and stomach samples, if being collected) for Target species (FAO species code) Basic biological data for by-catch species Biological samples of by-catch species (if being collected) Take photos</p>
<p>For trawl fishing activities ONLY</p> <p>Gear details Net ID Net type (ISSFCV) Headrope length (m) Groundrope length (m) Bobbin diameter (cm) Otterboard to wing length (m) Horizontal Opening (m) Vertical Opening (m)</p> <p>Codend mesh Mesh size (cm), codend circumference (cm), Orientation Mesh type (diamond, square, etc)</p> <p>Otterboard Type, weight (kg)</p> <p>Net design Net design description including make, model etc</p>

Trawl details

Trawl Number

Gear

Trawl type: Research or Commercial (R/C)

Observed (Yes/No)

Target Species (FAO species code)

Date Start (YYYY.MON.DD)

Date Finish (YYYY.MON.DD)

Time net deployed (hh:mm)

Time net retrieved (hh:mm)

Start and End Fishing

~~(For Trawl fishing – “start” is defined as when the otterboard is on the bottom, “end” is when the tow ends.)~~

For Trawl fishing – for bottom trawl “start” is defined as when the groundrope is on the bottom, “end” is when the tow ends.

– for midwater trawl “start” is defined as when the fishing gear is at target fishing depth, “end” is when the tow ends.

Time (hh:mm)

Latitude

Longitude

Trawl Depth (m)

Bottom Depth (m)

Other

Offal discharged during shooting (Y/N)

Offal discharged during hauling (Y/N)

Trawl speed (knots)

Horizontal opening (m)

Total catch (kg)

Observed catch composition

Observer ID

Was Haul observed for fish/invertebrate by-catch (Y/N):

Record the total weight of all sub-samples for this shot (kg):

Species

FAO species code

Scientific name

Total retained catch weight (kg)

Total discarded catch weight (kg)

Bycatch mitigation measures employed:

Were bird scaring (tori) lines in use? (Yes/No)

Were bird bafflers in use? (Yes/No)

Trawl warp strike (to be monitored for 15 minutes immediately after the net has been deployed).

<p>Trawl number Name of observer Start observation time (hh:mm) End observation time (hh:mm)</p> <p>Number of heavy warp strikes (record for Albatross, Giant Petrels, White chinned petrels, Other petrels)</p> <p>Air Water Sinkers</p> <p>Seabird abundance observation Seabirds present in observation area (y/n) Estimated numbers of abundance (by species)</p>
<p>For Longline fishing activities ONLY</p> <p>Longline Description Longline Type (FFSCV) Period in which the gear was used (YYYY.MON.DD) Start and end date (YYYY.MON.DD) Target Species (FAO species code)</p> <p>Main Line Material Diameter (mm) Integrated Wt (g/m)</p> <p>Branch Lines Material Length (M) Spacing (m)</p> <p>Hooks Type Make Total length (mm) Shank (mm) Gape (mm) Throat (mm) Front length (mm) Usual setting position Line off bottom (m) Hooks off bottom (m) Method of baiting (manual/automatic) Automatic baiting equipment (make and model)</p> <p>Hook sinkers Size (g) Position from hook (mm)</p>

Offal dumping position (port, starboard, stern)
 longline setting position (port, starboard, stern)
 Offal dumping during hauling (never, occasionally, always)
 Propeller rotation direction (clockwise/anti-clockwise)
 Detail the weight and distance between the line weights for the longline system used
 Single (Auto) Line (kg:m)
 Double (Spanish) Line (kg:m)
 Trotline (vertical droppers/trots attached to a mainline) (kg:m)

General Streamer Line Description

Vessel equipped with a streamer line (y/n)
 Number of streamer lines regularly set
 Streamer line position (port, starboard, stern)
 Streamer line length (m)
 Streamer length min/max (m)
 Attached height above water (m)
 Distance between streamers (m)
 Number of streamers
 Streamer design (single or paired)
 Aerial extent of line (m)
 Method used to assess aerial extent
 Streamer material
 Streamer line diameter (mm)
 Streamer colours
 Streamer line over bait entry position? (y/n/u)
 Distance from stern to bait entry point (m)
 Towed object (Y/N)
 Horizontal distance from bait entry point to streamer line (m)

Daily setting observations

Set Number (as referenced in catch and effort log)
 Set Type: Research or Commercial (R/C)
 Longline Type Code (FSSCV)
 Trotline cetacean exclusion device used (Y/N)
 Date of observation (YYYY/MON/DDy)

Setting information

Vessel setting speed (knots)
 Number sets unobserved since last set

Start and End setting for each haul

Date (YYYY/MON/DD)
 Time (hh:mm)
 Latitude
 Longitude
 Bottom Depth (m)
 Total length of longline set (km)
 Total number of hooks for the set

For each Observation

Start date (YYYY.MON.DD)

Start time (hh:mm)

End date (YYYY.MON.DD)

End time (hh:mm)

Details of Longline Setting

Main line length (m)

Number of hooks set

Number of Baskets/Magazines Set

Number of hooks per Basket/Magazine

Percentage hooks baited

Distance between branches (m)

Distance of hooks off bottom (m)

Bait species (FAO species code)

Deck lights during setting (On, Off)

Streamer lines used (Yes, No)

Number of streamer lines used

Offal dumping during setting (Yes, No)

Bait entry position (Port, Starboard, Stern)

Daily hauling observations

Set number

Date of observation (YYYY.MON.DD)

Hauling Information

Number of hooks observed for seabird and fish by-catch (tally period)

Offal dumped during hauling (Yes / No)

Gear lost

Number of sections lost

Number of hooks lost that were attached to lost sections of the longline

Number of other hooks lost (excluding hooks attached to lost sections)

Observed catch composition

Was Haul observed for fish/invertebrate by-catch (Y/N):

Estimate percentage of the haul observed for by-catch (%)

Species

Species code (FAO species code)

Total retained catch weight (kg)

Total discarded catch weight (kg)

Species Retained

Observed number retained

Observed number retained with tags

Species Discarded

Observed number discarded

Observed number discarded dead

Observed number discarded alive

Species Lost

Observed number lost/dropped off at surface
<p>For Trapping/Potting Fishing Activities ONLY</p> <p>Gear type pot type (with drawing) mesh size (mm)</p> <p>Funnel position orientation aperture (cm) number of chambers Escape port present (y/n) dimensions (cm) of escape port</p> <p>Processing Details and Conversion Factors (CF) Haul Number Name of observer Species Code (FAO species code) Processing Code Length Range Min Max Number of individuals Live Weight (kg) Processed Weight (kg) Grade Conversion Factor</p> <p>Set and haul details Set Number Date of observation YYYY.MON.DD) Set Type: Research or Commercial (R/C) Target species (FAO species code) Offal dumped during setting (Yes / No) Offal dumped during hauling (Yes / No)</p> <p>Start and End setting. Repeat for hauling Date (YYYY.MON.DD) Time (:mm) Latitude Longitude bottom depth (m)</p> <p>Gear Details Length of line (m) Type of line Pot spacing (m) Bait type</p> <p>Setting</p>

number of pots set
number of pots observed

Hauling

number of pots hauled
number of pots observed

Observed interactions with birds or marine mammals

Species Code (FAO species code)

Setting

Abundance (500m radius)
Gear interaction (y/n)

Hauling

Abundance (500m radius)
Gear interaction (y/n)

Observed catch composition

Name of observer

Was Haul observed for fish/invertebrate by-catch (Y/N):

Estimate percentage of the haul observed for by-catch (%):

Number of pots observed for by-catch:

Species Code (FAO species code)
total retained catch weight (kg)
total discarded catch weight (kg)

Species Retained

observed number retained
observed number retained with tags

Species Discarded

observed number discarded
observed number discarded dead
observed number discarded alive

Species Lost

observed number lost/dropped off at surface

For Dahn/Drop lining/Handline fishing activity ONLY**Dahn/Dropline Description**

Line Type
Period in which the gear was used (YYYY.MON.DD) Start and end date
Target species (FAO species code)

Main Line

Material
Diameter (mm)
Integrated Wt (g/m)

Hooks

Type
 Make
 Total length (mm)
 Shank (mm)
 Gape (mm)
 Throat (mm)
 Front length (mm)
 Usual setting position
 Line off bottom (m)
 Hooks off bottom (m)
 Method of baiting (manual/automatic)
 Automatic baiting equipment (make and model)

Offal

Offal dumping position (port, starboard, stern)
 offal dumping during hauling (never, occasionally, always)
 Propeller rotation direction (clockwise/anti-clockwise)

General Streamer Line Description

Vessel equipped with a streamer line (y/n)
 Number of streamer lines regularly set
 Streamer line position (port, starboard, stern)
 Streamer line length (m)
 Streamer length min/max (m)
 Attached height above water (m)
 Distance between streamers (m)
 Number of streamers
 Streamer design (single or paired)
 Ariel extent of line (m)
 Method used to assess aerial extent
 Streamer material
 Streamer line diameter (mm)
 Streamer colours
 Streamer line over bait entry position? (y/n/u)
 Distance from stern to bait entry point (m)
 Horizontal distance from bait entry point to streamer line (m)

Details of Dahn/Dropline/Handline Setting

Main line length (m)
 Number of hooks set
 Percentage hooks baited
 Distance between branches/snoods (m)
 Distance of hooks off bottom (m)
 Bait species
 Bait size
 Bait proportion
 Deck lights during setting (On, Off)
 Streamer lines used (Yes, No)
 Number of streamer lines used
 Offal dumping during setting (Yes, No)

<p>Daylight period Moonlight Bait entry position (Port, Starboard, Stern) Vessel setting speed (knots)</p> <p>Start and End setting. Repeat for Start and End of hauling Date (YYYY.MON.DD) Time (hh:mm) Latitude Longitude Bottom Depth (m)</p> <p>Gear lost Number of sections lost Number of hooks lost that were attached to lost sections of the dahn/dropline Number of other hooks lost (excluding hooks attached to lost sections)</p> <p>Observed catch composition Observer ID Was Haul observed for fish/invertebrate by-catch (Y/N): Estimate percentage of the haul observed for by-catch (%) Species (data shall be collected for each observed species) Species code (FAO species code) total retained catch weight (kg) total discarded catch weight (kg)</p> <p>Species Retained observed number retained observed number retained with tags</p> <p>Species Discarded observed number discarded observed number discarded dead observed number discarded alive</p> <p>Species Lost observed number lost/dropped off at surface</p>
<p>Interactions with Vulnerable Marine Ecosystems (VME)</p> <p>General information Name of observer Name of vessel Date Trip number Set number</p> <p>VME location Start and end positions of all gear deployments and/or observations. (Latitude/longitude) Depth(s) fished (m)</p>

Fishing Gear

Indicate fishing gears used at each location

VME Taxa

- a) Species (identified taxonomically as far as possible, or accompanied by a photograph where identification is difficult).
- b) An estimate of the quantity (weight (kg) or volume (m3)) of each listed benthic species caught in the tow.
- c) An overall estimate of the total quantity (weight (kg) or volume (m3)) of all invertebrate benthic species caught in the tow.
- d) Where possible, and particularly for new or scarce benthic species which do not appear in ID guides, whole samples should be collected and suitably preserved for identification on shore.
- 5) Collect representative biological samples from the entire VME catch. (Biological samples shall be collected and frozen when requested by the scientific authority in a Contracting Party). For some coral species that are under the CITES list photographs should be taken.

Specifications for the Exchange of Data

1. Coordinated Universal Time (UTC) shall be used to describe times, using the following submission format: YYYY-MON-DDThh:mm:ss where:
 - a. YYYY - represents a 4-digit year e.g. "2007"
 - b. MON - represents a 3-character month abbreviation e.g. "APR"
 - c. DD - represents a 2-digit day e.g. "05"
 - d. T - is a space separator
 - e. hh - represents hours based on the 24hr clock (length = 2 digits) e.g. "16"
 - f. mm - represents minutes (length = 2 digits) e.g. "05"
 - g. ss - represent seconds (length = 2 digits) e.g. "00"

Example

2003-JUL-17T13:10:00 = 1.10pm (1310h), 17 July 2003

2. Decimal degrees (WGS84) are to be used to describe locations.
3. The following standard shall be used for the submission of latitudinal/ longitudinal information:
 - a. Northern latitudes and eastern longitudes should be indicated by the use of [unsigned] positive decimal degree values
 - b. Southern latitudes and western longitudes should be indicated by the use of negative decimal degree values

Latitude - Degrees: Represented as positive (unsigned) or negative numbers from 0 to 89.99	E.g. If value = 83.2, this means 83.2° N E.g. if value = -83.2, this means 83.2° S
Longitude – Degrees: Represented as positive (unsigned) or negative numbers from 0 to 179.99	E.g. If value = 83.2, this means 83.2° E E.g. if value = -83.2, this means 83.2° W

4. Metric units of measure be used, specifically:
 - a. Tonnes or kilograms are to be used to describe catch weight
 - b. Metres are to be used to describe height, width, depth, beam or length
 - c. Cubic metres are to be used to describe volume
 - d. Kilowatts are to be used to describe engine power

CMM 2016/03

Conservation and Management Measure for Data Confidentiality and Procedures for access and use of data

Contracting Parties to the Southern Indian Ocean Fisheries Agreement;

RECOGNISING that ~~A~~article 4(a) of the *Southern Indian Ocean Fisheries Agreement* (SIOFA or the Agreement) calls on the Contracting Parties, in giving effect to the duty to cooperate, to adopt measures on the basis of the best scientific evidence available to ensure the long-term conservation of fishery resources, taking into account the sustainable use of such resources and implementing an ecosystem approach to their management;

FURTHER RECOGNISING ~~a~~Article 11(3)(d) of the Agreement which provides that Contracting Parties shall collect and share in a timely manner, complete and accurate data concerning fishing activities by vessels flying its flag operating in the area, in particular on vessel position, retained catch, discarded catch and fishing effort, where appropriate maintaining confidentiality of data as it relates to the application of relevant national legislation; and

RECALLING Article 14 of the Agreement which calls on Contracting Parties to promote transparency in decision making processes and other activities carried out under the Agreement;

ADOPTS~~adopts~~ the following Conservation and Management Measure (CMM) in accordance with Article 6 of the Agreement:

1. This CMM establishes the policy and procedures on confidentiality of data that will apply to data collected from Contracting Parties, cooperating non-Contracting Parties (CNCs) and Participating Fishing Entities (PFEs) in accordance with the Agreement and relevant SIOFA CMMs.

Data Submitted to the Secretariat

2. The policy for releasing catch-and-effort, length-frequency and observer data will be as follows:

Public domain data

a) The following data shall be considered to be “public domain data”:

i) Data for vessels including current flag, name, registration number, international radio call sign, IHS-Fairplay (IMO) number, previous names, port of registry, previous flag, type of vessel, types of fishing methods, length, length type, gross tonnage (and/or gross registered tonnage), power of main engine(s), hold capacity, vessel authorisation start and end dates; and

ii) Observer data grouped by 5° longitude by 5° latitude, stratified by month and by fishing nation/flag State, provided that:

A. the catch of no individual vessel can be identified within a time/area stratum; and

- B. the flag State that submitted the data provides its written authorisation that such data be considered to be “public domain data”.

b) The following data shall be considered to be “public domain catch and effort data”: 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”.

c) The Secretariat shall keep “public domain catch and effort data” confidential until the Meeting of the Parties has acted on the advice of the Scientific Committee in relation to a SIOFA Bottom Fishing Impact Assessment and SIOFA bottom fishing footprint as provided for under the Conservation and Management Measure for the [Interim Management of Bottom Fishing in the SIOFA Agreement Area \(CMM2016/01\)](#). This will not prevent observer data or finer scale catch and effort data being made available by the Secretariat to the Scientific Committee on a confidential basis where required.

d) The Secretariat shall compile and disseminate “public domain data”, and “public domain catch and effort data” provided the conditions in paragraph 2(c) are satisfied, through appropriate mechanisms, including the SIOFA website, once developed.

Finer level stratification

e) Finer-scale data including catch and effort, length-frequency and observer data will be made available to the Scientific Committee and any of its working groups, on a confidential basis, to undertake its work.

f) Catch-and-effort and length-frequency data grouped at a finer level of time-area stratification will only be released with written authorisation from the flag State that submitted the data. Each such data release will also require the specific permission of the Secretariat.

g) Individuals requesting the data are required to provide a description of the research project, including the objectives, methodology and intentions for publication. Prior to publication, the manuscript should be cleared by the Secretariat. The data are released only for use in the specified research project and the data must be destroyed upon completion of the project. However, with written authorisation from the flag State that submitted the data, catch-and-effort and length-frequency data may be released for long-term usage for research purposes, and in such cases the data need not be destroyed.

h) The identity of individual vessels will be hidden in finer-level data unless the individual requesting this information can justify its necessity and the flag State that submitted the data provides its written authorisation.

i) Individuals requesting data shall provide a report of the results of the research project to the SIOFA Secretariat for subsequent forwarding to the sources of the data.

Procedures for the safeguard of records

3. Procedures for safeguarding records and databases will be as follows:

a) Access to logbook-level information or detailed observer data will be restricted to SIOFA staff members who require these records for their official duties. Each staff member having access to these records will be required to sign an attestation recognising the restrictions on the use and disclosure of the information.†

b) Logbook and observer records will be kept locked, under the specific responsibility of the Data Manager. These sheets will only be released to authorised SIOFA ~~personnel~~ staff members for the purpose of data input, editing or verification. Copies of these records will be authorised only for legitimate purposes and will be subjected to the same restrictions on access and storage as the originals.†

c) Databases will be encrypted to preclude access by unauthorised persons. Full access to the database will be restricted to the Data Manager and to senior SIOFA staff members requiring access to these data for official purposes, under the authority of the SIOFA Executive Secretary. Staff entrusted with data input, editing and verification will be provided with access to those functions and data sets required for their work.

Data submitted to the Scientific Committee

4. Data submitted to the Scientific Committee and any of its working groups will be retained by the Secretariat or made available for other analyses only with the permission of the flag State that submitted the data.

5. The above rules of confidentiality will apply to all members of the Scientific Committee and any of its working groups.

CMM 2016/04**Conservation and Management Measure on Vessels without Nationality****Contracting Parties to the Southern Indian Ocean Fisheries Agreement (The Agreement);**

RECOGNISING that vessels without nationality operate without governance and oversight;

CONCERNED that fishing in the SIOFA Area of Application (the Agreement Area) by vessels without nationality undermines the objective of the Agreement and the work of the Meeting of the Parties;

NOTING Articles 92 and 94 of the United Nations Convention on the Law of the Sea (UNCLOS) relating to the status of ships and the duties of flag States; and

RECALLING that the FAO Council has adopted an International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated fishing (IUU fishing) and has recommended that States adopt measures consistent with international law in relation to fishing vessels without nationality involved in IUU fishing on the high seas;

***ADOPTS* the following Conservation and Management Measure (CMM) in accordance with Article 6 of the Agreement:**

1. A vessel without nationality is a vessel that, under international law, is not entitled to fly the flag of any State or, as referred to in Article 92 of UNCLOS, sails under the flag of two or more States, using them according to convenience.
2. Vessels determined under international law to be vessels without nationality that are fishing in the Agreement Area undermine the Agreement and the efforts of the Contracting Parties, ~~C~~Cooperating non-Contracting Parties (CNCs) and Participating Fishing Entities (PFEs) to ensure the long-term sustainability of the fishery resources, and are engaged in IUU fishing.
3. Contracting Parties, CNCs and PFEs are encouraged to take effective action in accordance with international law, including, where appropriate, enforcement action, against vessels without nationality that are engaging, or have engaged, in fishing or fishing related activities in the Agreement Area, and to prohibit the landing and transshipment of fish and fish products, and access to port services, by such vessels, except where such access is essential to the safety or health of the crew or the safety of the vessel.
4. Contracting Parties, CNCs and PFEs are encouraged to adopt necessary measures, including, where relevant, domestic legislation, to allow them to take the effective action referred to in paragraph 3 to prevent and deter vessels without nationality from engaging in fishing or fishing related activities in the Agreement Area.
5. Contracting Parties, CNCs and PFEs are encouraged to share information about vessels suspected to be without nationality to assist in clarifying the status of such vessels, and about the activities of vessels without nationality to inform decisions about action to prevent and deter such vessels from engaging in fishing or fishing related activities in the Agreement Area. Any sightings of fishing vessels that are suspected of, or confirmed as being, without nationality that may be fishing in the high seas of the Agreement Area shall be reported to the Secretariat as soon as possible by the appropriate authorities of the Contracting Party, CNC or PFE whose vessel or aircraft made the sighting. The Secretariat will circulate such information to all Contracting Parties, CNCs and PFEs as

soon as practicable, and will provide a report to the next ordinary meeting of the Compliance Committee of all such information provided.

6. Contracting Parties, CNCs and PFEs are encouraged to cooperate with all flag States to strengthen their legal, operational and institutional capacity to take action against their flagged vessels that have engaged in IUU fishing or fishing related activities in the Agreement Area, including the imposition of adequate sanctions, as an alternative to de-flagging such vessels, thereby rendering such vessels without nationality.

CMM 2016/05**Conservation and Management Measure regarding the use of large-scale pelagic driftnets and deepwater gillnets in the Southern Indian Ocean Fisheries Agreement Area**

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Contracting Parties to the Southern Indian Ocean Fisheries Agreement;

CONCERNED by the impact of large-scale pelagic driftnets and deepwater gillnets on fishery resources, bycatch species and deep sea habitats and ecosystems, including the impact of lost and abandoned nets;

NOTING the relevance of United Nations General Assembly (UNGA) Resolution 46/215 on *Large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas*, which calls for the implementation of UNGA resolutions 44/225 and 45/197 and for a global moratorium on all large-scale pelagic driftnet fishing on the high seas of the world's oceans;

FURTHER NOTING Resolution 61/105, adopted by the UNGA at the 61st Plenary Meeting on 8 December 2006 and subsequent UNGA resolutions that call on States and regional fisheries management organisations to regulate bottom fisheries and implement measures in accordance with the precautionary approach and ecosystem approaches to fisheries management;

RECALLING that Article 6(1)(c) and (d) of the Southern Indian Ocean Fisheries Agreement (the Agreement) call on Contracting Parties, in giving effect to the objectives of the Agreement, to evaluate the impact of fishing on the fishery resources and on the marine environment, taking into account the environmental and oceanographic characteristics of the SIOFA Area of Application (the Agreement Area) and to adopt conservation and management measures (CMMs) necessary for ensuring the long-term conservation and sustainable use of the fishery resources in the Agreement Area; and

RECOGNISING Article 4(e) of the Agreement which requires Contracting Parties to apply the principle that fishing practices and management measures shall take due account of the need to minimise the harmful impact that fishing activities may have on the marine environment;

ADOPTS the following CMM in accordance with Article 6 of the Agreement:

1. The use of all large-scale pelagic driftnets¹ in the Agreement Area is prohibited for any vessel flying the flag of a Contracting Party, cooperating non-Contracting Party (CNCP) or participating fishing entity (PFE).
2. Contracting Parties, CNCPs and PFEs recommend that deepwater gillnets² not be used in the Agreement Area by any vessel flying the flag of a Contracting Party, CNCP or PFE until such time as the Meeting of the Parties has received a recommendation from the Scientific Committee.

¹ 'Large-scale pelagic driftnets' (drift gillnets) are defined as a gillnet or other net or a combination of nets which is more than 2.5 kilometres in length the purpose of which is to enmesh, entrap or entangle fish by drifting on the surface or in the water.

² 'Deepwater gillnets' (trammel net, set nets, anchored nets, sink nets) are defined as strings of single, double or triple netting walls, held vertically, usually on or near the seafloor, in which fish will gill, entangle or enmesh. Several types of nets may be combined in one gear. These nets can be used either alone or, as is more usual, in large numbers placed in line ('fleets' of nets). The gear can be set, anchored to the bottom or left drifting, free or connected with the vessel.

3. Nothing in this measure shall prevent Contracting Parties, CNCPs or PFEs from applying more stringent measures to large-scale pelagic driftnets not covered by this CMM, or to deepwater gillnets.

4. Until a Compliance Monitoring Scheme is adopted by the Meeting of the Parties, each Contracting Party, CNCP and PFE shall provide a report on its implementation of this CMM to the ordinary Compliance Committee meeting in 2017. In the event that the Compliance Committee does not meet in 2017, implementation reports shall be provided to the 2017 ordinary Meeting of the Parties. In the case of a States or fishing entity that becomes a Contracting Party, CNCP or PFE after this CMM enters into force, that are not yet Party to the Agreement, implementation reports shall be provided to the first Compliance Committee meeting after the Agreement enters into force for that State or ~~CNCPs and PFEs shall provide implementation reports to the first Compliance Committee meeting after~~ their CNCP status or PFE status becomes effective.

CMM 2016/01**Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area****Contracting Parties to the Southern Indian Ocean Fisheries Agreement;**

RECOGNISING that Article 4(a) of the *Southern Indian Ocean Fisheries Agreement* (the Agreement) calls on the Contracting Parties, in giving effect to the duty to cooperate, to adopt measures on the basis of the best scientific evidence available to ensure the long-term conservation of fishery resources, taking into account the sustainable use of such resources and implementing an ecosystem approach to their management;

FURTHER RECOGNISING Articles 4(c), (e) and (f) of the Agreement which call on the Contracting Parties to apply the precautionary approach, that fishing practices and management measures shall take due account of the need to minimise the harmful impact that fishing activities may have on the marine environment and noting that biodiversity in the marine environment shall be protected;

FURTHER RECOGNISING Articles 6(1)(d) and (e) of the Agreement which provides that the Meeting of the Parties shall adopt conservation and management measures (CMMs) for ensuring the long-term sustainability of fishery resources, taking into account the need to protect marine biodiversity, based on the best scientific evidence and adopt generally recommended international minimum standards for the responsible conduct of fishing operations;

MINDFUL of Article 16 of the Agreement that calls on Contracting Parties, acting jointly under the Agreement, to cooperate closely with other international fisheries and related organisations in matters of mutual interest;

NOTING United Nations General Assembly (UNGA) Resolution 61/105 and subsequent resolutions of UNGA that call upon RFMOs to assess, on the basis of the best available scientific information, whether individual bottom fishing activities would have significant adverse impacts on vulnerable marine ecosystems (VMEs), and to ensure that if it is assessed that these activities would have significant adverse impacts, they are managed to prevent such impacts, or not authorised to proceed;

FURTHER NOTING UNGA Resolution 64/72 which calls upon RFMOs to establish and implement appropriate protocols for the implementation of UNGA Resolution 61/105, including definitions of what constitutes evidence of an encounter with a VME, in particular threshold levels and indicator species; and to implement the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas (FAO, 2009; FAO Deep-sea Fisheries Guidelines) in order to sustainably manage fish stocks and protect VMEs;

FURTHER NOTING UNGA Resolution 66/68 which encourages RFMOs to consider the results available from marine scientific research, including those obtained from seabed mapping programs concerning the identification of areas containing VMEs, and to adopt conservation and management measures to prevent significant adverse impacts from bottom fishing on such ecosystems, consistent with the FAO Deep-sea Fisheries Guidelines, or to close such areas to bottom fishing until such conservation and management measures are adopted, as well as to continue to undertake further marine scientific research, in accordance with international law as reflected in Part XIII of the United Nations Convention on the Law of the Sea;

AWARE of the steps being taken by the Meeting of the Parties to address the impacts of large-scale pelagic drift nets and deepwater gillnets in the SIOFA Area of Application (the Agreement Area) through the adoption of CMM 2016/05;

COMMITTED to ensuring that bottom fishing undertaken in the Agreement Area is consistent with the long-term sustainability of deep sea fish stocks and the protection of the marine environment; and

DESIRING to progress the development of a SIOFA-wide bottom fishing impact assessment and SIOFA-wide footprint, as recommended by the Scientific Committee at its first ordinary meeting in Fremantle, Australia, in March 2016;

ADOPTS the following CMM in accordance with Article 6 of the Agreement:

Objective

1. The objective of this CMM is to promote the sustainable management of deep-sea fisheries resources in the Agreement Area, including target fish stocks and non-target species, and to protect the marine ecosystem, including *inter alia*, the prevention of significant adverse impacts on vulnerable marine ecosystems.

General provisions and definitions

2. This CMM applies to all fishing vessels flying the flag of a Contracting Party, cooperating non-Contracting Party (CNC P) or participating fishing entity (PFE) to the Agreement engaging or intending to engage in bottom fishing in the Agreement Area. A reference in this CMM to fishing and related activities *of a Contracting Party, CNC P or PFE* (such as *its fishing, its catch or its effort*) is taken to refer to fishing and related activities undertaken by vessels flying its flag.

3. The following definitions apply to this CMM:

- (a) 'vulnerable marine ecosystem' (VME) means a marine ecosystem identified using the criteria outlined in paragraph 42 of the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas (FAO, 2009; FAO Deep-sea Fisheries Guidelines).
- (b) 'bottom fishing' means fishing using any gear type likely to come in contact with the seafloor or benthic organisms during the normal course of operations.
- (c) 'SIOFA bottom fishing footprint' means a map of the spatial extent of historical bottom fishing in the Agreement Area, for all vessels flagged to all Contracting Parties, CNC P s and PFE s over a period to be defined by the Meeting of the Parties.
- (d) 'electronic observer program' means a program that uses electronic monitoring equipment in place of, or in conjunction with, a human observer or human observers on board a vessel that is capable of generating, storing and transmitting data to competent authorities.

4. The provisions of this CMM are not necessarily to be considered precedents for future allocation or other decisions in accordance with Articles 6(2),(3) and (4) of the Agreement relating to participation in bottom fisheries in the Agreement Area and adjacent areas of national jurisdiction, as appropriate.

Scientific Committee work on bottom fishing and subsequent consideration by the Meeting of the Parties

5. The Scientific Committee shall, by no later than the close of the ordinary meeting of the Scientific Committee in 2017, and thereafter whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop and provide advice and recommendations to the Meeting of the Parties on:

- (a) a SIOFA Bottom Fishing Impact Assessment Standard (BFIAS) which takes account of the latest scientific information available;
- (b) maps of where VMEs are known to occur, or likely to occur, in the Agreement Area;
- (c) guidelines for evaluating and approving electronic observer programs for scientific data collection for consideration by the Meeting of the Parties; and
- (d) standard protocols for future protected areas designation (areas which should be closed to fishing).

6. The Scientific Committee shall, by no later than the close of the ordinary meeting of the Scientific Committee in 2019, and thereafter whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop and provide advice and recommendations to the Meeting of the Parties on:

- (a) the status of stocks of principal deep-sea fishery resources targeted, and, to the extent possible, taken as bycatch and caught incidentally in these deep-sea fisheries, including straddling fishery resources;
- (b) criteria for what constitutes evidence of an encounter with a VME, in particular threshold levels and indicator species; and
- (c) the most appropriate response to a VME encounter, including *inter alia* closing particular areas to a particular gear type or types.

7. The Scientific Committee shall, by no later than the close of the ordinary meeting of the Scientific Committee in 2020, and thereafter whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop and provide advice and recommendations to the Meeting of the Parties on:

- (a) an appropriate SIOFA bottom fishing footprint based on the data provided by Contracting Parties, CNCPs and PFEs to the Secretariat under paragraph 13; and
- (b) a SIOFA Bottom Fishing Impact Assessment (SIOFA BFIA). The SIOFA BFIA shall take into account the activities of all fishing vessels to which this CMM applies that, at the time the SIOFA BFIA is prepared, are engaged in, or intending to engage in, bottom fishing within the agreed SIOFA bottom fishing footprint.

8. Upon receipt of advice and recommendations from the Scientific Committee on the matters listed in paragraphs 5 to 7, the Meeting of the Parties shall act on the Scientific Committee's advice and recommendations at its next ordinary meeting. This may include, when the Meeting of the Parties considers it appropriate, to authorise any document or other output arising from the advice or recommendations, and amendments thereto.

Duties of Contracting Parties, CNCPs and PFEs undertaking bottom fishing activity in the Agreement Area

Interim bottom fishing measures

9. (1) Until such time as the Meeting of the Parties has acted in accordance with paragraph 8 on the advice of the Scientific Committee provided in accordance with paragraph 7, each Contracting Party, CNCP and PFE shall, unless otherwise approved by the Meeting of the Parties, establish and apply specific measures to limit the bottom fishing effort and/or catch, and spatial extent of the bottom fishing effort of vessels flying their flag. In particular, such measures shall include:

- (a) for Contracting Parties, CNCPs or PFEs that have fished more than 40 days in a single calendar year, in the Agreement Area, at the time this CMM was adopted:
 - i. limits on its bottom fishing effort and/or catch, over a 12 month period to its average annual level in active years over a representative period for which reliable data exists;
 - ii. constraints on the spatial distribution of its bottom fishing effort, excluding line and trap methods, to recently fished areas to prevent any expansion of such fishing activities;
 - iii. provisions to ensure its bottom fishing will not have significant adverse impacts on VMEs and, where applicable, shall take into account its Bottom Fishing Impact Assessment (BFIA) prepared and submitted pursuant to paragraph 14, and any areas identified under paragraph 35 where VMEs are known to occur, or are likely to occur; and
 - iv. provisions ensuring that any vessel flying its flag is not authorised to fish in any areas that the Meeting of the Parties has decided to close to fishing.

- (b) for Contracting Parties, CNCPs or PFEs that have not fished more than 40 days in a single calendar year, in the Agreement Area, at the time this CMM was adopted:
 - i. limits on its bottom fishing effort and/or catch, and spatial distribution, as disclosed to the Meeting of the Parties in accordance with paragraph 9(2); and
 - ii. provisions as referred to in subparagraphs 9(1)(a)(iii) and (iv).

(2) The measures established by Contracting Parties, CNCPs and PFEs pursuant to this paragraph shall be disclosed to the next ordinary Meeting of the Parties following the entry into force of this CMM, and shall be made publicly available on the SIOFA website, by the Secretariat, once the website has been developed.¹

(3) Contracting Parties, CNCPs and PFEs may revise the measures they establish pursuant to this paragraph provided that any amendments made are consistent with the requirements of paragraph 9(1). Revised measures shall be notified to the Secretariat within 30 days of the amendment, and shall be disclosed at the next ordinary Meeting of the Parties.

¹ Until such time as the website is developed, this information will be made available upon request to the Secretariat.

(4) The provisions of this paragraph are not necessarily to be considered a precedent for future decisions taken by the Meeting of the Parties pursuant to paragraph 8.

10. Any Contracting Party, CNCP or PFE that has not submitted the measures required pursuant to paragraph 9(1), shall not authorise any vessels flying its flag to bottom fish in the Agreement Area until:

- (a) that Contracting Party, CNCP or PFE has submitted the measures required in paragraph 9(1); or
- (b) it has otherwise been decided by the Meeting of the Parties.

11. Until the Meeting of the Parties has acted on the Scientific Committee's advice on SIOFA threshold levels pursuant to paragraph 6(b), Contracting Parties, CNCPs and PFEs shall establish and apply to vessels flying their flag threshold levels for encounters with VMEs, taking into account paragraph 68 of the FAO Deep-sea Fisheries Guidelines. These threshold levels shall be disclosed in the measures referred to in paragraph 9(1).

12. Until the Meeting of the Parties has acted on the Scientific Committee's advice on the most appropriate response to a VME encounter pursuant to paragraph 6(c), Contracting Parties, CNCPs and PFEs shall require any vessel flying their flag to cease bottom fishing activities within:

- (a) For bottom or mid water trawling, or fishing with any other net - two (2) nautical miles either side of a trawl track extended by two (2) nautical miles at each end;
- (b) For longline and trap activities - a radius of one (1) nautical mile from the midpoint of the line segment;² or
- (c) For all other bottom fishing gear types - a radius of one (1) nautical mile from the midpoint of the operation,

where evidence of a VME is encountered above threshold levels established under paragraph 11 in the course of fishing operations. Contracting Parties, CNCPs and PFEs shall report any such encounter in their National Reports to the Scientific Committee in accordance with the guidelines at Annex 1, including any action taken by that Contracting Party, CNCP or PFE in respect of the relevant site.

Provision of data by Contracting Parties, CNCPs and PFEs

13. Contracting Parties, CNCPs and PFEs shall, at least 30 days prior to the commencement of the ordinary meeting of the Scientific Committee in 2018, submit to the Secretariat:

- (a) relevant data on the spatial extent of its historical bottom fishing effort in the Agreement Area expressed as grid blocks of at least 20 minute resolution or, if available, a finer scale; and
- (b) any other data the Scientific Committee may consider to be useful in developing the SIOFA BFIA referred to in paragraph 7(b), including data relating to recorded encounters with VMEs or indicators of VMEs.

14. (a) Any Contracting Party, CNCP or PFE that authorises or is seeking to authorise any vessel flying its flag to bottom fish in the Agreement Area shall, at least 30 days prior to the

² Line segment means a 1000 hook section of line or a 1200 metre section of line, whichever is the shorter, and for pot lines a 1200 metre section

commencement of the ordinary meeting of the Scientific Committee in 2018, submit to the Secretariat a BFIA for its individual bottom fishing activities in the Agreement Area that, to the extent possible, accords with paragraph 18. Any Contracting Party, CNCP and PFE that has prepared, or prepares, a BFIA prior to this CMM entering into force is encouraged to submit this BFIA to the Scientific Committee as soon as possible.

(b) Any Contracting Party, CNCP or PFE that has not submitted a BFIA pursuant to subparagraph (a) may, at least 30 days prior to the commencement of any subsequent ordinary meeting of the Scientific Committee and before the Meeting of the Parties has authorised the SIOFA bottom fishing footprint and the SIOFA BFIA developed by the Scientific Committee in accordance with paragraph 7, submit to the Secretariat a BFIA.

15. The Scientific Committee shall consider all BFIA received under paragraph 14(a) at its ordinary meeting in 2018 or, if the BFIA is submitted under paragraph 14(b), at the next ordinary meeting of the Scientific Committee, and provide advice in its meeting report as to:

- (a) the likely cumulative impacts of bottom fishing impact activity from vessels flying the flag of a CP, CNCP or PFE in the Agreement Area; and
- (b) whether each BFIA meets an appropriate standard in light of international standards and the SIOFA BFIAS, where applicable.

16. If the Scientific Committee's advice is that a BFIA does not meet an appropriate standard, the Meeting of the Parties may request that Contracting Party, CNCP or PFE who submitted the BFIA to revise and resubmit its BFIA to the next ordinary meeting of the Scientific Committee, and make a decision to either:

- (c) suspend any vessel flying the flag of that Contracting Party, CNCP or PFE from bottom fishing in the Agreement Area until the Scientific Committee provides advice that the BFIA meets an appropriate standard; or
- (d) undertake any other course of action, as the Meeting of the Parties may decide, taking into account Scientific Committee advice and the objectives of this CMM.

17. Any Contracting Party, CNCP or PFE that has not submitted a BFIA in accordance with paragraph 14 shall not authorise any vessels flying its flag to bottom fish in the Agreement Area until:

- (a) that Contracting Party, CNCP or PFE has prepared a BFIA, and the Scientific Committee has reviewed that BFIA in accordance with paragraph 15; or
- (b) the Meeting of the Parties has authorised the SIOFA bottom fishing footprint and the SIOFA BFIA developed by the Scientific Committee in accordance with paragraph 7; or
- (c) it has otherwise been decided by the Meeting of the Parties.

18. All BFIA, including the SIOFA BFIA, shall:

- (a) be prepared, to the extent possible, in accordance with the FAO Deep-sea Fisheries Guidelines;
- (b) meet the standards of the SIOFA BFIAS (if the BFIA is prepared after the Meeting of the Parties has adopted the BFIAS);
- (c) take into account areas identified where VMEs are known or are likely to occur in the area to be fished;

- (d) take into account all relevant information provided pursuant to paragraphs 13 and 35, and in addition, for the SIOFA BFIA, paragraph 14;
- (e) be updated when a substantial change in the fishery has occurred, such that it is likely that the risk or impacts of the fishery may have changed;
- (f) assess, to the extent possible, the historical and anticipated cumulative impact of all bottom fishing activity in the Agreement Area, if applicable;
- (g) address whether the proposed activities achieve the objectives described in paragraph 1 of this CMM and Article 2 of the Agreement; and
- (h) be made publicly available on the SIOFA website, once developed.

Provision of data by, and interim bottom fishing measures for, new Contracting Parties, CNCPs and PFEs

19. Paragraphs 9 to 12 shall apply, *mutatis mutandis*, and with the modified timeframes set out in this paragraph, to any State or fishing entity that becomes a Contracting Party, CNCP or PFE after this CMM is adopted. This includes the ability of the Meeting of the Parties to otherwise approve interim bottom fishing measures. Each of these new Contracting Parties, CNCPs and PFEs shall:

- (a) prior to authorising any vessels flying its flag to bottom fish in the Agreement Area, advise the Meeting of the Parties of the measures it intends to take pursuant to paragraph 9(1);
- (b) 30 days prior to the first ordinary meeting of the Scientific Committee after it becomes a Contracting Party, CNCP or PFE, submit the data referred to in paragraph 13 to the Scientific Committee;
- (c) 30 days prior to the second ordinary meeting of the Scientific Committee after it becomes a Contracting Party, CNCP or PFE, submit to the Scientific Committee, if it authorises or is seeking to authorise any vessel flying its flag to bottom fish in the Agreement Area, BFIA, as outlined in paragraph 14.

Proposals to bottom fish in the Agreement Area in a manner at variance with Established Measures

20. A Contracting Party, CNCP or PFE seeking to authorise any vessel flying its flag to undertake bottom fishing in the Agreement Area in a manner at variance with the requirements of paragraph 9(1) shall submit to the Scientific Committee, at least 30 days prior to an ordinary meeting of the Scientific Committee, a proposal to undertake that activity or activities. This proposal shall include an assessment of the impact of the proposed fishing activity in accordance with the requirements for BFIA's outlined in paragraph 18, any proposed measures to mitigate that impact, and any other information as required by the Scientific Committee to undertake the assessment in paragraph 21.

21. On receipt of any proposal developed pursuant to paragraph 20, the Scientific Committee shall, at its next ordinary meeting:

- (a) assess, on the basis of the best available scientific information, whether the proposed bottom fishing would have significant adverse impacts on VMEs;

- (b) if it is assessed that these activities would have significant adverse impacts, consider what measures should be taken to prevent such impacts, or, if those impacts cannot be appropriately mitigated, whether the proposed bottom fishing should proceed or not;
- (c) assess, taking into account, *inter alia*: the cumulative impacts of other fishing occurring in that area, where such information is available; whether the proposed activities are compatible with the sustainable management of bottom fisheries, including target fish stocks and non-target species; and the protection of the marine environment, including *inter alia*, the prevention of significant adverse impacts on VMEs; and
- (d) provide recommendations and advice to the Meeting of the Parties in its meeting report on each of these matters, as applicable.

22. The Meeting of the Parties shall, taking into account the recommendations and advice of the Scientific Committee, decide whether or not to authorise bottom fishing in accordance with a proposal made pursuant to paragraph 20 including, if applicable, the extent to which such bottom fishing shall be authorised.

23. If applicable, the Meeting of the Parties shall also decide which measures or conditions shall be applied to any activity authorised pursuant to paragraph 22 to ensure that fishing activity is consistent with the objectives of Article 2 of the Agreement and paragraph 1 of this CMM.

General management and conditions for bottom fishing in the Agreement Area

24. Consistently with Article 11(1)(a) of the Agreement, Contracting Parties, CNCPs and PFEs shall only authorise vessels flying their flag to bottom fish in the Agreement Area in accordance with the provisions of the Agreement, this CMM and all other applicable CMMs, and shall ensure that such vessels do not engage in any activity which undermines the effectiveness of these measures.

25. All Contracting Parties, CNCPs and PFEs shall ensure that all vessels flying its flag that participate in bottom fishing in the Agreement Area are equipped and configured to comply with all relevant CMMs.

26. Consistently with Article 11(3)(a) of the Agreement, Contracting Parties, CNCPs and PFEs shall only authorise vessels flying their flag to bottom fish in the Agreement Area where they are able to exercise their responsibilities as a flag State under the Agreement and all CMMs.

27. Contracting Parties, CNCPs and PFEs shall ensure that vessels flying their flag provide the minimum required data to the Secretariat in accordance with the SIOFA data standards CMM (CMM 2016/02).

28. Nothing in this CMM shall affect the rights of a Contracting Party, CNCP or PFE to apply additional or more stringent compatible measures to vessels flying their flag that are conducting bottom fishing.

29. Nothing in this CMM exempts a Contracting Party, CNCP or PFE from complying with any other obligations in the Agreement or any CMMs adopted by the Meeting of the Parties.

Scientific observer coverage

30. Each Contracting Party, CNCP and PFE shall ensure that any vessel flying its flag and undertaking bottom fishing in the Agreement Area:

- (a) using trawl gear has 100 percent scientific observer coverage for the duration of the trip;³ and
- (b) using any other bottom fishing gear type has 20 percent scientific observer coverage in any fishing year.

31. Consistent with paragraph 13 of the SIOFA Data Standards CMM (CMM 2016/02), the Scientific Committee shall review the observer coverage levels prescribed in paragraph 30 at its ordinary meeting in 2018 and provide advice to the Meeting of the Parties thereon.

32. (a) The scientific observer coverage levels outlined in paragraph 30 shall be fulfilled through the use of human observers, except to the extent authorised by the Meeting of the Parties pursuant to subparagraph (c)(iii).

(b), Once the Meeting of the Parties has adopted Guidelines for evaluating and approving electronic observer programs developed pursuant to paragraph 5(c), a Contracting Party, CNCP or PFE may submit a proposal to the Scientific Committee seeking to use an electronic observer program which uses, entirely or in part, electronic monitoring equipment, human observers and/or a port sampling program. As part of this proposal, that Contracting Party, CNCP or PFE shall submit evidence of, and data relating to, a statistically robust trial of the program that demonstrates it meets the data requirements prescribed in the SIOFA data standards CMM (CMM 2016/02), once adopted by the Meeting of the Parties.

(c) Following the submission of the proposal by the Contracting Party, CNCP or PFE to the Scientific Committee:

- i. The Scientific Committee shall review the proposal and provide recommendations and advice thereon to the Meeting of the Parties, taking into account the Guidelines and whether the program will reliably collect all data required by the SIOFA data standards CMM, once adopted by the Meeting of the Parties.
- ii. The Compliance Committee shall also review the proposal and provide advice and recommendations thereon to the Meeting of the Parties.
- iii. On receipt of the advice by the Scientific Committee and the Compliance Committee on the proposal, the Meeting of the Parties shall, at its next meeting, consider whether to authorise the use of that program by that Contracting Party, CNCP or PFE in place of the exclusive use of human observers.

Position Reporting

33. Each Contracting Party, CNCP and PFE 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.

Vulnerable Marine Ecosystem closures

34. Where the Meeting of the Parties, taking into account advice provided by the Scientific Committee, determines that bottom fishing may have significant adverse impacts on VMEs in areas where VMEs are known to occur, or are likely to occur, based on the best available

³ This provision shall enter into force for Japan on 1 January 2017 and for the Cook Islands on 1 June 2017. These Contracting Parties will take all necessary steps towards implementing this provision in the interim.

scientific information, the Meeting of the Parties may take a decision to close such areas to bottom fishing, either entirely or with respect to bottom fishing by a particular gear type or types.

35. The Meeting of the Parties shall cooperate to identify, on the basis of the best available scientific information including advice and recommendations provided by the Scientific Committee pursuant to paragraph 5(b), areas where VMEs are known or likely to occur in the Agreement Area and to map these sites, and provide such data and information to all Contracting Parties, CNCPs and PFEs for circulation.

36. The Meeting of the Parties recommends that all Contracting Parties note the advice from the first meeting of the Scientific Committee in relation to Benthic Protected Areas.

Cooperation with other States

37. Contracting Parties resolve, individually or jointly, to request those States and fishing entities that are undertaking bottom fishing in the Agreement Area but are not currently Contracting Parties, CNCPs or PFEs to cooperate fully in the implementation of this measure and to consider participating in the work of SIOFA as a matter of priority.

Review

38. This CMM shall be reviewed no later than at the ordinary Meeting of the Parties in 2019. This review shall take into account, *inter alia*, the latest advice of the Scientific Committee, including advice on those matters listed in paragraphs 5 to 7 and appropriate catch levels for principal target species, in accordance with the objective described in paragraph 1.

Annex 1 - Guidelines for the Preparation and Submission of Notifications of Encounters with VMEs**1. General Information**

Include contact information, nationality, vessel name(s) and dates of data collection.

2. VME location

Start and end positions of all gear deployments and/or observations.

Maps of fishing locations, underlying bathymetry or habitat and spatial scale of fishing.

Depth(s) fished.

3. Fishing gear

Indicate fishing gears used at each location.

4. Additional data collected

Indicate additional data collected at or near the locations fished, if possible.

Data such as multibeam bathymetry, oceanographic data such as CTD profiles, current profiles, water chemistry, substrate types recorded at or near those locations, other fauna observed, video recordings, acoustic profiles etc.

5. VME taxa

For each station fished, provide details of VME taxa observed, including but not limited to their relative density, absolute density, or weight and/or number of taxa.

CMM 2016/02**Conservation and Management Measure for the Collection, Reporting, Verification and Exchange of Data relating to fishing activities in the Agreement Area*****Contracting Parties to the Southern Indian Ocean Fisheries Agreement:***

RECALLING that Article 6(1) (f) of the *Southern Indian Ocean Fisheries Agreement* (the Agreement) calls on the Meeting of the Parties to develop rules for the collection and verification of scientific and statistical data, as well as for the submission, publication, dissemination and use of such data;

FURTHER RECALLING that Articles 10(1)(c) and 11(3) set out the duties relevant to the collection and provision of data and related processes for Contracting Parties and Flag States respectively;

RECOGNISING the importance of developing comprehensive arrangements for data collection, reporting, verification and exchange of data to assist the Scientific Committee in performing its functions as outlined in Article 7 of the Agreement;

NOTING the relevance of Articles 10(e) and 14 of the *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (UNFSA) which call on States to cooperate through regional fisheries management organisations to agree on the standards for the collection, reporting, verification and exchange of data on fisheries for the stocks, and the specifications and format for the data to be provided and to cooperate in their scientific research;

CONSIDERING the provisions set forth in the *Resolution on data collection concerning the high seas in the Southern Indian Ocean*, adopted by the Conference on the Southern Indian Ocean Fisheries Agreement in the Seychelles from 13-16 July 2004;

NOTING the importance of data collection and catch reporting for the purposes of ensuring scientific stock assessment and implementing an ecosystem approach to fisheries management; and

FURTHER NOTING that the Meeting of Parties has adopted policies and procedures for the maintenance of data confidentiality (CMM 2016/03);

***ADOPTS* the following conservation and management measure (CMM) in accordance with Article 6 of the Agreement:**

Application

1. This CMM applies to all Contracting Parties, cooperating non-Contracting Parties (CNCs) and Participating Fishing Entities (PFEs).
2. This CMM prescribes the standards for the collection, reporting, verification and exchange of data related to fishing activities by vessels fishing in the SIOFA Area of Application (the Agreement Area) that are flying the flag of a Contracting Party, CNC or PFE. These data standards shall assist the Meeting of the Parties to fulfil its objectives under the Agreement insofar as it relates to assessing the state of the fisheries within SIOFA's competence, including the status of target and non-target species and the impact of fishing on the marine environment.

Terminology

3. The following definitions apply to this CMM including its annexes:
 - a. 'other species of concern' means those species as may be defined by the Scientific Committee from time to time.
 - b. 'National Report' means the report defined in paragraph 8 of this CMM.

Vessel Catch and Effort Data

Collection of data

4. Contracting Parties, CNCPs and PFEs shall ensure that data on fishing activities, including for target, non-target and associated and dependent species such as marine mammals, marine reptiles, seabirds or 'other species of concern', are collected from vessels flying their flag that are fishing in the Agreement Area in accordance with the relevant sections of Annex A.
5. The Scientific Committee shall, by no later than the ordinary meeting of the Scientific Committee in 2017, provide advice and recommendations to the Meeting of the Parties on an appropriate spatial resolution for the collection and reporting of data to facilitate effective stock assessment. Until the Meeting of the Parties, based on the advice of the Scientific Committee, determines an appropriate spatial resolution for the collection and reporting of data, Contracting Parties, CNCPs and PFEs shall ensure that data are collected on a haul by haul basis.

Data collection and submission

6. Contracting Parties, CNCPs and PFEs shall report to the Secretariat, by 31 May each year, the data collected under paragraphs 4 and 5 for the previous calendar year, in accordance with the format prescribed in the corresponding annexes.
7. Contracting Parties, CNCPs and PFEs shall provide to the Secretariat, by 31 May each year, annual catch summaries for all species/groups caught in the Agreement Area during the previous calendar year. The catch summaries shall include the following information:
 - a. Calendar year (eg 2015)
 - b. FAO statistical area (eg FAO87)
 - c. Species/group name (common name and scientific name)
 - d. Species/group code (FAO3-alpha code 19, EG ORY) (if available)
 - e. Annual catch total – tonnes raised to 'live' weight.

National report

8. Following the entry into force of this CMM, Contracting Parties, CNCPs and PFEs shall provide to the Scientific Committee, at least 30 days prior to the commencement of each ordinary meeting, an annual National Report of their fishing, research and management activities in accordance with the following:
 - a. For the first report: the National Report shall include details of activities of the previous five calendar years;

- b. For all reports thereafter: the National Report shall include details of activities of the previous calendar year; and
- c. In either case, the National Report shall take into account the guidelines prepared by the Scientific Committee for the preparation of such reports.

Historical Data

9. To assist with the development of a bottom fishing footprint and stock assessments, Contracting Parties, CNCPs and PFEs shall provide to the Secretariat, by 31 January 2017,¹ historical catch, effort and, if available, observer data from vessels flying their flag that were fishing in the Agreement Area at any time during the period 2000 to 2015, and any previous years where available, in a format as close as is possible to the annexes to this CMM. The catch, effort and, if available, observer data provided to the Secretariat may initially be provided as unverified data, and updated with verified data any time before 31 January 2018. Any State or fishing entity that becomes a Party to the Agreement, a CNCP or PFE after the date this CMM is adopted shall provide their historical data to the Secretariat within 12 months of becoming Party to the Agreement, or becoming a CNCP or PFE.
10. Where possible, Contracting Parties, CNCPs and PFEs are encouraged to provide relevant, reliable historical data for species caught in waters under their national jurisdiction where such information would assist in understanding the status of the stocks and the impacts of fishing on all target species, non-target and associated and dependent species and the marine environment within the Agreement Area.

Scientific Observer Data

11. All Contracting Parties, CNCPs and PFEs shall implement national scientific observer programmes to collect from activities undertaken by vessels flying their flag:
 - a. Vessel information, effort and catch data for its fishing activities in the Agreement Area, including target, non-target and associated and dependent species including marine mammals, marine reptiles, seabirds or 'other species of concern';
 - b. Biological or other data and information relevant to the management of fishery resources in the Agreement Area, as specified in this CMM, or as identified from time to time by the Scientific Committee or through processes identified by the Meeting of the Parties; and
 - c. Relevant scientific information related to the implementation of the provisions of the CMMs adopted by the Meeting of the Parties.
12. Contracting Parties, CNCPs and PFEs shall, through their National Report, provide to the Scientific Committee an annual observer programme implementation report which should include sections covering: observer training, programme design and coverage, type of data collected, and any problems encountered during the previous calendar year.

¹ If the SIOFA database is not established by this time, Contracting Parties, CNCPs and PFEs shall provide a comprehensive data summary to the ordinary meeting of the Scientific Committee in 2017.

13. Contracting Parties, CNCPs and PFEs shall endeavour, for all observed trips, to collect observer data in accordance with the relevant sections of Annex B. All observer data collected by Contracting Parties, CNCPs and PFEs shall be reported to the Secretariat by 31 May each year for the previous calendar year. Annex B will be reviewed by the Scientific Committee at its ordinary meeting in 2018 based on observer data provided.

Vessel Monitoring System Data

Implementation of Vessel Monitoring System

14. Contracting Parties, CNCPs and PFEs shall ensure that all vessels flying their flag that are fishing in the Agreement Area are fitted with operational automatic location communicator (ALC) reporting back to the flag State.
15. Contracting Parties, CNCPs and PFEs shall ensure that ALC units on vessels flying their flag remain operational at all times while in the Agreement Area.
16. Contracting Parties, CNCPs and PFEs shall develop, implement and improve systems to maintain a record of all vessel position information reported through VMS systems and logbooks, in relation to vessels flying their flags while these vessels are in the Agreement Area, such that this information may be used to document vessel activity in the Agreement Area, and to validate fishing position information provided by those vessels.
17. Contracting Parties, CNCPs and PFEs are encouraged to share VMS data where it is requested from another Contracting Party, CNCP or PFEs in support of patrol or surveillance activities.

Frequency and accuracy of position reporting

18. Contracting Parties, CNCPs and PFEs shall ensure that:
- a. VMS position reports are transmitted from each vessel flying their flag:
 - i. at least once every 2 hours if fishing using trawling methods or if within 20nm of an exclusive economic zone boundary; or
 - ii. at least once every four hours in other circumstances.
 - b. Under normal satellite navigation operating conditions, positions derived from the data reported shall be accurate to within 100m; and
 - c. VMS position reports include at least the following information:

Category	Data	Remarks
Vessel information	Static unique	For example, FAO 3 alpha or 2 alpha, country code followed by national vessel registration number
Activity detail	Latitude	Position latitude (decimal degrees, to the nearest 0.01 degrees)

	Longitude	Position longitude (decimal degrees, to the nearest 0.01 degrees)
Message	Date	Position date (UTC)
	Time	Position time (UTC)

Data Verification

19. Contracting Parties, CNCPs and PFEs shall:
- a. ensure that fishery data are verified through an appropriate system of data verification mechanisms;
 - b. develop, implement and improve data verification mechanisms, which may include:
 - i. Position verification through vessel monitoring systems;
 - ii. Independent monitoring, including scientific observer programs and approved electronic observer programs,² to verify industry data on catch, effort, catch composition (target and non-target), discards and other details of fishing operations;
 - iii. Vessel trip, landing and transshipment reports; and
 - iv. Port sampling.
 - c. provide to the Scientific Committee, through their National Report, an annual data verification report which should provide information regarding their development and implementation of data verification mechanisms.

Format for data submission

20. Contracting Parties, CNCPs and PFEs shall report all data required to be reported by this measure to the Secretariat in accordance with the formats described in this CMM, including its annexes.
21. Specifications for the submission of data:
- a. times, longitudinal/latitudinal information and units of measure are to be reported in accordance with the format described in Annex C;
 - b. Species are to be described using the FAO 3 letter Species Codes;³
 - c. Fishing methods are to be described using the International Standard Classification of Fishing Gear (ISSCFG - 29 July 1980) codes;⁴ and
 - d. Types of fishing vessels are to be described using the International Standard Classification of Fishery Vessels (ISSCFV) codes.⁵

Review

² Approved electronic observer programs refers to those programs that meet the SIOFA agreed standard and have been reviewed by the Scientific Committee and approved by the Meeting of the Parties as being capable of meeting the data requirements in this CMM.

³ www.fao.org/fi/statist/fisoft/asfis/asfis.asp

⁴ <http://www.fao.org/fishery/cwp/handbook/M>

⁵ <http://www.fao.org/fishery/cwp/handbook/L>

22. This CMM should be reviewed periodically by the Scientific Committee and the Meeting of the Parties, taking into account new information or data requirements as may be decided.

Standards for the Collection, Reporting, Verification and Exchange of Data Annexes

List of Annexes:

Annex A - Vessel Catch and Effort Data

Annex B – Voluntary Observer Data

Annex C - Specifications for the Exchange of Data

Vessel Catch and Effort Data

1. Contracting Parties, CNCPs and PFEs shall ensure that the following data on fishing activities are collected from all fishing vessels flying their flag in the Agreement Area:

Data Set – Fishing activities
<p>General (Trip) Vessel flag State (ISO 3-apha) Name of vessel International radio call sign (if any) Vessel Registration number (flag State) Lloyd's / IMO /IHS Fairplay Number (if allocated) Vessel size: Gross Tonnage (Gross register tonnage may be used if GT is not available, or both) Name of person filling in the data</p>
<p>Weight Conversion Factor Species Processing type Conversion factor = live weight/processed weight</p>
<p>Haul Information Intended Target species (FAO code) Type of fishing (C)ommercial; (R)esearch; (S)urvey data Haul ID number</p>
<p>Set Start date and Time (Based on Coordinated Universal Time (UTC)) Recorded at start and end of fishing For longline vessels - record at start and end of setting, in addition to start and end of haul Date format (YYYY.MON.DD) Time format (hh.mm) Decimal degrees (WGS84 are to be used to describe locations)</p>
<p>Position at start and end of fishing Latitude Longitude Use N and S rather than + and – Use E and W rather than + and – For longline vessels – position is recorded at the start and end of setting For Trawl fishing – for bottom trawl “start” is defined as when the groundrope is on the bottom, “end” is when the tow ends. – for midwater trawl “start” is defined as when the fishing gear is at target fishing depth, “end” is when the tow ends.</p>
<p>Bottom Depth (m) As recorded at the start and end of fishing</p>
<p>Fishing / gear depth (m) As recorded at the start and end of fishing For trapping/potting, Actual Fishing / gear depth (m) as recorded at start is required</p>
<p>Species retained Estimated catch retained on board by species (FAO species/group code/scientific name) in live weight (kg)</p>

<p>Species Discarded An estimation of the amount of living marine resources discarded by species if possible in live weight (kg)</p>
<p>Incidental bycatch of marine mammals, seabirds, reptiles and 'other species of concern' Yes / No For each species caught</p> <ul style="list-style-type: none"> • Species name • Number alive • Number dead or injured

2. Contracting Parties, CNCPs and PFEs shall ensure that the following gear-specific data on fishing activities, as applicable, are collected from all fishing vessels flying their flag in the Agreement Area.

Data Set - Gear
<p>Trawl Mesh Size (mm) Trawl technique: Type of trawl: (S)ingle, (D)ouble or (T)riple</p>
<p>Longline Type of longline (Spanish, Trotline, Autoline) Type of bait Hook size (mm) Hook spacing (m) Hook code or make Length of line (m) Number of hooks set Number hooks per cluster (if Trotline) Number of hooks lost (attached to lost sections of line)</p>
<p>Trap/Pot Pot type Type of line: Dropline or longline Length of line (m) Pot spacing (m) Number of pots set Number of pots lost Type of bait</p>
<p>Dahn/Drop Line/ Handline Total number of hooks in the set Number of hooks lost Hook code or make Type of leader used Total number of line lifts in the set Type of bait used</p>

Voluntary Observer Data

1. Contracting Parties, CNCPs and PFEs shall endeavour, for all observed trips, to collect and provide to the Secretariat the data contained in this Annex in accordance with the format set out below.
2. Contracting Parties, CNCPs and PFEs shall, where appropriate, ensure that observers are briefed and provided with documented length-frequency and biological sampling protocols and the specific priorities for the trip for the sampling activities documented below.
3. Contracting Parties, CNCPs and PFEs shall endeavor to collect tissue, otolith and/or stomach samples in accordance with any research programs developed by the Scientific Committee.

Data Set – Observer data
<p>Trip Details</p> <p>Trip Number Cruise details (start and end dates – YYYY.MON.DD) Date report is generated (UTC) Current vessel flag State (ISO 3-apha) Name of vessel</p>
<p>Observer Details</p> <p>Observer name and ID Nationality (ISO 3-apha) Employing organisation Contact name in organisation (Address/email/fax) Boarding location (UNLOCODE, if applicable or Latitude/Longitude) Boarding Date (UTC:YYYY.MON.DD) Disembarkation location (UNLOCODE, if applicable or Latitude/Longitude) Disembarkation date (UTC:YYYY.MON.DD) Time Zone (UTC +/-)</p>
<p>Length Frequency Data</p> <p>Representative and randomly sampled length-frequency data shall be collected for the target species (FAO species code) Where possible, representative and randomly sampled length-frequency data shall be collected for other main by-catch species. Length data shall be collected and recorded at the most precise level appropriate for the species (cm or mm and whether to the nearest unit or unit below) and the type of measurement used (total length, fork length, or standard length) shall also be recorded. Where possible, total weight of length-frequency samples should be recorded, or estimated and the method of estimation recorded Where possible, Observers should determine and record sex of measured fish to generate</p>

length-frequency data stratified by sex
<p>Biological Sampling</p> <p>Species</p> <p>Length (mm or cm), with record of the type of length measurement used.</p> <p>Skates and rays:</p> <ul style="list-style-type: none"> • maximum disk width shall be measured <p>Sharks</p> <ul style="list-style-type: none"> • Appropriate length measurement to be used should be selected for each species. As a default, total length should be measured. <p>Weight (kg)</p> <p>Sex (male, female, immature, unsexed)</p> <p>Maturity stage (and criteria/schedule used)</p> <p>Gonad weight (g)</p> <p>Otoliths</p>
<p>Incidental bycatch of seabirds, mammals turtles or 'other species of concern'</p> <p>The following data shall be collected for all seabirds, mammals, turtles and other species of concern caught in fishing operations:</p> <ul style="list-style-type: none"> • Species (identified taxonomically as far as possible, or accompanied by photographs if identification is difficult) and size • Estimated species abundance around fishing vessel • Species interactions with fishing gear • Count of the number of each species caught per tow or set • Fate of bycatch animal(s) (retained or released/discarded) • If released, life status (vigorous, alive, lethargic, injured, dead) upon release • If injured, what was the cause of injury? • If dead, then collect information or samples for onshore identification in accordance with pre-determined sampling protocols. Where this is not possible, observers may be required to collect sub-samples of identifying parts, as specified in biological sampling protocols <ul style="list-style-type: none"> ○ Record the type of interaction (hook/line entanglement/warp strike/net capture/other) if other, describe • Sex of each individual for taxa where this is feasible from external observation, e.g. pinnipeds, small cetaceans or Elasmobranchii species • identify any circumstances or actions that may have contributed to the bycatch event? (E.g. tori line tangle, high levels of bait loss)
<p>Tag Recoveries</p> <p>The following data shall be collected for all recovered fish, seabird, mammal or reptile tags if the organism is dead, to be retained, or alive:</p> <ul style="list-style-type: none"> • Name of observer • Name of vessel • International radio call sign (if any) • Vessel flag State (ISO 3-apha) • Collect, label (with all details below) and store the actual tags for later return to the tagging agency • Species from which tag recovered • Tag colour and type (spaghetti, archival)

<ul style="list-style-type: none"> • Tag numbers • Date and time of capture (UTC) • Location of capture (Lat/Lon, to the nearest 1 minute) • Animal length / size (cm or mm) with description of what measurement was taken (such as total length, fork length, etc) • Sex (F=female, M=male, I=indeterminate, D=not examined) • Whether the tags were found during a period of fishing that was being observed (Y/N)
<p>Hierarchies for Observer Data collection</p> <p>Fishing Operation Information All vessel and tow / set / effort information.</p> <p>Reporting of Catches Record time, weight of catch sampled versus total catch or effort (e.g. number of hooks), and total numbers of each species caught Identification and counts of seabirds, mammals, reptiles (e.g. turtles), sensitive benthic species and vulnerable species Record numbers or weights of each species retained or discarded Record instances of depredation, where appropriate</p> <p>Biological Sampling Check for presence of tags Length-frequency data for Target species (FAO species code) Basic biological data (sex, maturity) for Target species (FAO species code) Length-frequency data for main by-catch species Otoliths (and stomach samples, if being collected) for Target species (FAO species code) Basic biological data for by-catch species Biological samples of by-catch species (if being collected) Take photos</p>
<p>For trawl fishing activities ONLY</p> <p><i>Gear details</i> Net ID Net type (ISSFCV) Headrope length (m) Groundrope length (m) Bobbin diameter (cm) Otterboard to wing length (m) Horizontal Opening (m) Vertical Opening (m)</p> <p><i>Codend mesh</i> Mesh size (cm), codend circumference (cm), Orientation Mesh type (diamond, square, etc)</p> <p><i>Otterboard</i> Type, weight (kg)</p> <p><i>Net design</i> Net design description including make, model etc</p>

Trawl details

Trawl Number

Gear

Trawl type: Research or Commercial (R/C)

Observed (Yes/No)

Target Species (FAO species code)

Date Start (YYYY.MON.DD)

Date Finish (YYYY.MON.DD)

Time net deployed (hh:mm)

Time net retrieved (hh:mm)

Start and End Fishing

For Trawl fishing – for bottom trawl “start” is defined as when the groundrope is on the bottom, “end” is when the tow ends.

– for midwater trawl “start” is defined as when the fishing gear is at target fishing depth, “end” is when the tow ends.

Time (hh:mm)

Latitude

Longitude

Trawl Depth (m)

Bottom Depth (m)

Other

Offal discharged during shooting (Y/N)

Offal discharged during hauling (Y/N)

Trawl speed (knots)

Horizontal opening (m)

Total catch (kg)

Observed catch composition

Observer ID

Was Haul observed for fish/invertebrate by-catch (Y/N):

Record the total weight of all sub-samples for this shot (kg):

Species

FAO species code

Scientific name

Total retained catch weight (kg)

Total discarded catch weight (kg)

Bycatch mitigation measures employed:

Were bird scaring (tori) lines in use? (Yes/No)

Were bird bafflers in use? (Yes/No)

Trawl warp strike (to be monitored for 15 minutes immediately after the net has been deployed).

Trawl number

Name of observer

Start observation time (hh:mm)

End observation time (hh:mm)

Number of heavy warp strikes (record for Albatross, Giant Petrels, White chinned petrels, Other petrels)

Air

Water

Sinker

Seabird abundance observation

Seabirds present in observation area (y/n)

Estimated numbers of abundance (by species)

For Longline fishing activities ONLY

Longline Description

Longline Type (FFSSCV)

Period in which the gear was used (YYYY.MON.DD)

Start and end date (YYYY.MON.DD)

Target Species (FAO species code)

Main Line

Material

Diameter (mm)

Integrated Wt (g/m)

Branch Lines

Material

Length (M)

Spacing (m)

Hooks

Type

Make

Total length (mm)

Shank (mm)

Gape (mm)

Throat (mm)

Front length (mm)

Usual setting position

Line off bottom (m)

Hooks off bottom (m)

Method of baiting (manual/automatic)

Automatic baiting equipment (make and model)

Hook sinkers

Size (g)

Position from hook (mm)

Offal dumping position (port, starboard, stern)

longline setting position (port, starboard, stern)

Offal dumping during hauling (never, occasionally, always)
 Propeller rotation direction (clockwise/anti-clockwise)
 Detail the weight and distance between the line weights for the longline system used
 Single (Auto) Line (kg:m)
 Double (Spanish) Line (kg:m)
 Trotline (vertical droppers/trots attached to a mainline) (kg:m)

General Streamer Line Description

Vessel equipped with a streamer line (y/n)
 Number of streamer lines regularly set
 Streamer line position (port, starboard, stern)
 Streamer line length (m)
 Streamer length min/max (m)
 Attached height above water (m)
 Distance between streamers (m)
 Number of streamers
 Streamer design (single or paired)
 Aerial extent of line (m)
 Method used to assess aerial extent
 Streamer material
 Streamer line diameter (mm)
 Streamer colours
 Streamer line over bait entry position? (y/n/u)
 Distance from stern to bait entry point (m)
 Towed object (Y/N)
 Horizontal distance from bait entry point to streamer line (m)

Daily setting observations

Set Number (as referenced in catch and effort log)
 Set Type: Research or Commercial (R/C)
 Longline Type Code (FSSCV)
 Trotline cetacean exclusion device used (Y/N)
 Date of observation (YYYY/MON/DDy)

Setting information

Vessel setting speed (knots)
 Number sets unobserved since last set

Start and End setting for each haul

Date (YYYY/MON/DD)
 Time (hh:mm)
 Latitude
 Longitude
 Bottom Depth (m)
 Total length of longline set (km)
 Total number of hooks for the set

For each Observation

Start date (YYYY.MON.DD)
 Start time (hh:mm)
 End date (YYYY.MON.DD)

End time (hh:mm)

Details of Longline Setting

Main line length (m)

Number of hooks set

Number of Baskets/Magazines Set

Number of hooks per Basket/Magazine

Percentage hooks baited

Distance between branches (m)

Distance of hooks off bottom (m)

Bait species (FAO species code)

Deck lights during setting (On, Off)

Streamer lines used (Yes, No)

Number of streamer lines used

Offal dumping during setting (Yes, No)

Bait entry position (Port, Starboard, Stern)

Daily hauling observations

Set number

Date of observation (YYYY.MON.DD)

Hauling Information

Number of hooks observed for seabird and fish by-catch (tally period)

Offal dumped during hauling (Yes / No)

Gear lost

Number of sections lost

Number of hooks lost that were attached to lost sections of the longline

Number of other hooks lost (excluding hooks attached to lost sections)

Observed catch composition

Was Haul observed for fish/invertebrate by-catch (Y/N):

Estimate percentage of the haul observed for by-catch (%)

Species

Species code (FAO species code)

Total retained catch weight (kg)

Total discarded catch weight (kg)

Species Retained

Observed number retained

Observed number retained with tags

Species Discarded

Observed number discarded

Observed number discarded dead

Observed number discarded alive

Species Lost

Observed number lost/dropped off at surface

For Trapping/Potting Fishing Activities ONLY***Gear type***

pot type (with drawing)
 mesh size (mm)

Funnel position

orientation
 aperture (cm)
 number of chambers
 Escape port present (y/n)
 dimensions (cm) of escape port

Processing Details and Conversion Factors (CF)

Haul Number
 Name of observer
 Species Code (FAO species code)
 Processing Code
 Length Range
 Min
 Max
 Number of individuals
 Live Weight (kg)
 Processed Weight (kg)
 Grade
 Conversion Factor

Set and haul details

Set Number
 Date of observation YYYY.MON.DD)
 Set Type: Research or Commercial (R/C)
 Target species (FAO species code)
 Offal dumped during setting (Yes / No)
 Offal dumped during hauling (Yes / No)

Start and End setting. Repeat for hauling

Date (YYYY.MON.DD)
 Time (:mm)
 Latitude
 Longitude
 bottom depth (m)

Gear Details

Length of line (m)
 Type of line
 Pot spacing (m)
 Bait type

Setting

number of pots set
 number of pots observed

Hauling

number of pots hauled
number of pots observed

Observed interactions with birds or marine mammals

Species Code (FAO species code)

Setting

Abundance (500m radius)
Gear interaction (y/n)

Hauling

Abundance (500m radius)
Gear interaction (y/n)

Observed catch composition

Name of observer
Was Haul observed for fish/invertebrate by-catch (Y/N):
Estimate percentage of the haul observed for by-catch (%):

Number of pots observed for by-catch:

Species Code (FAO species code)
total retained catch weight (kg)
total discarded catch weight (kg)

Species Retained

observed number retained
observed number retained with tags

Species Discarded

observed number discarded
observed number discarded dead
observed number discarded alive

Species Lost

observed number lost/dropped off at surface

For Dahn/Drop lining/Handline fishing activity ONLY**Dahn/Dropline Description**

Line Type
Period in which the gear was used (YYYY.MON.DD) Start and end date
Target species (FAO species code)

Main Line

Material
Diameter (mm)
Integrated Wt (g/m)

Hooks

Type

Make
 Total length (mm)
 Shank (mm)
 Gape (mm)
 Throat (mm)
 Front length (mm)
 Usual setting position
 Line off bottom (m)
 Hooks off bottom (m)
 Method of baiting (manual/automatic)
 Automatic baiting equipment (make and model)

Offal

Offal dumping position (port, starboard, stern)
 offal dumping during hauling (never, occasionally, always)
 Propeller rotation direction (clockwise/anti-clockwise)

General Streamer Line Description

Vessel equipped with a streamer line (y/n)
 Number of streamer lines regularly set
 Streamer line position (port, starboard, stern)
 Streamer line length (m)
 Streamer length min/max (m)
 Attached height above water (m)
 Distance between streamers (m)
 Number of streamers
 Streamer design (single or paired)
 Ariel extent of line (m)
 Method used to assess aerial extent
 Streamer material
 Streamer line diameter (mm)
 Streamer colours
 Streamer line over bait entry position? (y/n/u)
 Distance from stern to bait entry point (m)
 Horizontal distance from bait entry point to streamer line (m)

Details of Dahn/Dropline/Handline Setting

Main line length (m)
 Number of hooks set
 Percentage hooks baited
 Distance between branches/snoods (m)
 Distance of hooks off bottom (m)
 Bait species
 Bait size
 Bait proportion
 Deck lights during setting (On, Off)
 Streamer lines used (Yes, No)
 Number of streamer lines used
 Offal dumping during setting (Yes, No)
 Daylight period
 Moonlight

Bait entry position (Port, Starboard, Stern)

Vessel setting speed (knots)

Start and End setting. Repeat for Start and End of hauling

Date (YYYY.MON.DD)

Time (hh:mm)

Latitude

Longitude

Bottom Depth (m)

Gear lost

Number of sections lost

Number of hooks lost that were attached to lost sections of the dahn/dropline

Number of other hooks lost (excluding hooks attached to lost sections)

Observed catch composition

Observer ID

Was Haul observed for fish/invertebrate by-catch (Y/N):

Estimate percentage of the haul observed for by-catch (%)

Species (data shall be collected for each observed species)

Species code (FAO species code)

total retained catch weight (kg)

total discarded catch weight (kg)

Species Retained

observed number retained

observed number retained with tags

Species Discarded

observed number discarded

observed number discarded dead

observed number discarded alive

Species Lost

observed number lost/dropped off at surface

Interactions with Vulnerable Marine Ecosystems (VME)

General information

Name of observer

Name of vessel

Date

Trip number

Set number

VME location

Start and end positions of all gear deployments and/or observations. (Latitude/longitude)

Depth(s) fished (m)

Fishing Gear

Indicate fishing gears used at each location

VME Taxa

- a) Species (identified taxonomically as far as possible, or accompanied by a photograph where identification is difficult).
- b) An estimate of the quantity (weight (kg) or volume (m³)) of each listed benthic species caught in the tow.
- c) An overall estimate of the total quantity (weight (kg) or volume (m³)) of all invertebrate benthic species caught in the tow.
- d) Where possible, and particularly for new or scarce benthic species which do not appear in ID guides, whole samples should be collected and suitably preserved for identification on shore.
- 5) Collect representative biological samples from the entire VME catch. (Biological samples shall be collected and frozen when requested by the scientific authority in a Contracting Party). For some coral species that are under the CITES list photographs should be taken.

Specifications for the Exchange of Data

1. Coordinated Universal Time (UTC) shall be used to describe times, using the following submission format: YYYY-MON-DDThh:mm:ss where:
 - a. YYYY - represents a 4-digit year e.g. "2007"
 - b. MON - represents a 3-character month abbreviation e.g. "APR"
 - c. DD - represents a 2-digit day e.g. "05"
 - d. T - is a space separator
 - e. hh - represents hours based on the 24hr clock (length = 2 digits) e.g. "16"
 - f. mm - represents minutes (length = 2 digits) e.g. "05"
 - g. ss - represent seconds (length = 2 digits) e.g. "00"

Example

2003-JUL-17T13:10:00 = 1.10pm (1310h), 17 July 2003

2. Decimal degrees (WGS84) are to be used to describe locations.
3. The following standard shall be used for the submission of latitudinal/ longitudinal information:
 - a. Northern latitudes and eastern longitudes should be indicated by the use of [unsigned] positive decimal degree values
 - b. Southern latitudes and western longitudes should be indicated by the use of negative decimal degree values

Latitude - Degrees: Represented as positive (unsigned) or negative numbers from 0 to 89.99	E.g. If value = 83.2, this means 83.2° N E.g. if value = -83.2, this means 83.2° S
Longitude – Degrees: Represented as positive (unsigned) or negative numbers from 0 to 179.99	E.g. If value = 83.2, this means 83.2° E E.g. if value = -83.2, this means 83.2° W

4. Metric units of measure be used, specifically:
 - a. Tonnes or kilograms are to be used to describe catch weight
 - b. Metres are to be used to describe height, width, depth, beam or length
 - c. Cubic metres are to be used to describe volume
 - d. Kilowatts are to be used to describe engine power

CMM 2016/03**Conservation and Management Measure for Data Confidentiality and Procedures for access and use of data****Contracting Parties to the Southern Indian Ocean Fisheries Agreement;**

RECOGNISING that Article 4(a) of the *Southern Indian Ocean Fisheries Agreement* (SIOFA or the Agreement) calls on the Contracting Parties, in giving effect to the duty to cooperate, to adopt measures on the basis of the best scientific evidence available to ensure the long-term conservation of fishery resources, taking into account the sustainable use of such resources and implementing an ecosystem approach to their management;

FURTHER RECOGNISING Article 11(3)(d) of the Agreement which provides that Contracting Parties shall collect and share in a timely manner, complete and accurate data concerning fishing activities by vessels flying its flag operating in the area, in particular on vessel position, retained catch, discarded catch and fishing effort, where appropriate maintaining confidentiality of data as it relates to the application of relevant national legislation; and

RECALLING Article 14 of the Agreement which calls on Contracting Parties to promote transparency in decision making processes and other activities carried out under the Agreement;

ADOPTS the following Conservation and Management Measure (CMM) in accordance with Article 6 of the Agreement:

1. This CMM establishes the policy and procedures on confidentiality of data that will apply to data collected from Contracting Parties, cooperating non-Contracting Parties (CNCs) and Participating Fishing Entities (PFEs) in accordance with the Agreement and relevant SIOFA CMMs.

Data Submitted to the Secretariat

2. The policy for releasing catch-and-effort, length-frequency and observer data will be as follows:

Public domain data

a) The following data shall be considered to be “public domain data”:

i) Data for vessels including current flag, name, registration number, international radio call sign, IHS-Fairplay (IMO) number, previous names, port of registry, previous flag, type of vessel, types of fishing methods, length, length type, gross tonnage (and/or gross registered tonnage), power of main engine(s), hold capacity, vessel authorisation start and end dates; and

ii) Observer data grouped by 5° longitude by 5° latitude, stratified by month and by flag State, provided that:

A. the catch of no individual vessel can be identified within a time/area stratum; and

- B. the flag State that submitted the data provides its written authorisation that such data be considered to be “public domain data”.

b) The following data shall be considered to be “public domain catch and effort data”: 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”.

c) The Secretariat shall keep “public domain catch and effort data” confidential until the Meeting of the Parties has acted on the advice of the Scientific Committee in relation to a SIOFA Bottom Fishing Impact Assessment and SIOFA bottom fishing footprint as provided for under the Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area (CMM2016/01). This will not prevent observer data or finer scale catch and effort data being made available by the Secretariat to the Scientific Committee on a confidential basis where required.

d) The Secretariat shall compile and disseminate “public domain data”, and “public domain catch and effort data” provided the conditions in paragraph 2(c) are satisfied, through appropriate mechanisms, including the SIOFA website, once developed.

Finer level stratification

e) Finer-scale data including catch and effort, length-frequency and observer data will be made available to the Scientific Committee and any of its working groups, on a confidential basis, to undertake its work.

f) Catch and effort and length-frequency data grouped at a finer level of time-area stratification will only be released with written authorisation from the flag State that submitted the data. Each such data release will also require the specific permission of the Secretariat.

g) Individuals requesting the data are required to provide a description of the research project, including the objectives, methodology and intentions for publication. Prior to publication, the manuscript should be cleared by the Secretariat. The data are released only for use in the specified research project and the data must be destroyed upon completion of the project. However, with written authorisation from the flag State that submitted the data, catch-and-effort and length-frequency data may be released for long-term usage for research purposes, and in such cases the data need not be destroyed.

h) The identity of individual vessels will be hidden in finer-level data unless the individual requesting this information can justify its necessity and the flag State that submitted the data provides its written authorisation.

i) Individuals requesting data shall provide a report of the results of the research project to the SIOFA Secretariat for subsequent forwarding to the sources of the data.

Procedures for the safeguard of records

3. Procedures for safeguarding records and databases will be as follows:

a) Access to logbook-level information or detailed observer data will be restricted to SIOFA staff members who require these records for their official duties. Each staff member having access to these records will be required to sign an attestation recognising the restrictions on the use and disclosure of the information.

b) Logbook and observer records will be kept locked, under the specific responsibility of the Data Manager. These sheets will only be released to authorised SIOFA staff members for the purpose of data input, editing or verification. Copies of these records will be authorised only for legitimate purposes and will be subjected to the same restrictions on access and storage as the originals.

c) Databases will be encrypted to preclude access by unauthorised persons. Full access to the database will be restricted to the Data Manager and to senior SIOFA staff members requiring access to these data for official purposes, under the authority of the SIOFA Executive Secretary. Staff entrusted with data input, editing and verification will be provided with access to those functions and data sets required for their work.

Data submitted to the Scientific Committee

4. Data submitted to the Scientific Committee and any of its working groups will be retained by the Secretariat or made available for other analyses only with the permission of the flag State that submitted the data.

5. The above rules of confidentiality will apply to all members of the Scientific Committee and any of its working groups.

CMM 2016/04**Conservation and Management Measure on Vessels without Nationality****Contracting Parties to the Southern Indian Ocean Fisheries Agreement (The Agreement);**

RECOGNISING that vessels without nationality operate without governance and oversight;

CONCERNED that fishing in the SIOFA Area of Application (the Agreement Area) by vessels without nationality undermines the objective of the Agreement and the work of the Meeting of the Parties;

NOTING Articles 92 and 94 of the United Nations Convention on the Law of the Sea (UNCLOS) relating to the status of ships and the duties of flag States; and

RECALLING that the FAO Council has adopted an International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated fishing (IUU fishing) and has recommended that States adopt measures consistent with international law in relation to fishing vessels without nationality involved in IUU fishing on the high seas;

ADOPTS the following Conservation and Management Measure (CMM) in accordance with Article 6 of the Agreement:

1. A vessel without nationality is a vessel that, under international law, is not entitled to fly the flag of any State or, as referred to in Article 92 of UNCLOS, sails under the flag of two or more States, using them according to convenience.
2. Vessels determined under international law to be vessels without nationality that are fishing in the Agreement Area undermine the Agreement and the efforts of the Contracting Parties, cooperating non-Contracting Parties (CNCs) and Participating Fishing Entities (PFEs) to ensure the long-term sustainability of the fishery resources, and are engaged in IUU fishing.
3. Contracting Parties, CNCs and PFEs are encouraged to take effective action in accordance with international law, including, where appropriate, enforcement action, against vessels without nationality that are engaging, or have engaged, in fishing or fishing related activities in the Agreement Area, and to prohibit the landing and transshipment of fish and fish products, and access to port services, by such vessels, except where such access is essential to the safety or health of the crew or the safety of the vessel/s.
4. Contracting Parties, CNCs and PFEs are encouraged to adopt necessary measures, including, where relevant, domestic legislation, to allow them to take the effective action referred to in paragraph 3 to prevent and deter vessels without nationality from engaging in fishing or fishing related activities in the Agreement Area.
5. Contracting Parties, CNCs and PFEs are encouraged to share information about vessels suspected to be without nationality to assist in clarifying the status of such vessels, and about the activities of vessels without nationality to inform decisions about action to prevent and deter such vessels from engaging in fishing or fishing related activities in the Agreement Area. Any sightings of fishing vessels that are suspected of, or confirmed as being, without nationality that may be fishing in the high seas of the Agreement Area shall be reported to the Secretariat as soon as possible by the appropriate authorities of the Contracting Party, CNC or PFE whose vessel or aircraft made the sighting. The Secretariat will circulate such information to all Contracting Parties, CNCs and PFEs as

soon as practicable, and will provide a report to the next ordinary meeting of the Compliance Committee of all such information provided.

6. Contracting Parties, CNCs and PFEs are encouraged to cooperate with all flag States to strengthen their legal, operational and institutional capacity to take action against their flagged vessels that have engaged in IUU fishing or fishing related activities in the Agreement Area, including the imposition of adequate sanctions, as an alternative to de-flagging such vessels, thereby rendering such vessels without nationality.

CMM 2016/05**Conservation and Management Measure regarding the use of large-scale pelagic driftnets and deepwater gillnets in the Southern Indian Ocean Fisheries Agreement Area****Contracting Parties to the Southern Indian Ocean Fisheries Agreement;**

CONCERNED by the impact of large-scale pelagic driftnets and deepwater gillnets on fishery resources, bycatch species and deep sea habitats and ecosystems, including the impact of lost and abandoned nets;

NOTING the relevance of United Nations General Assembly (UNGA) Resolution 46/215 on *Large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas*, which calls for the implementation of UNGA resolutions 44/225 and 45/197 and for a global moratorium on all large-scale pelagic driftnet fishing on the high seas of the world's oceans;

FURTHER NOTING Resolution 61/105, adopted by the UNGA at the 61st Plenary Meeting on 8 December 2006 and subsequent UNGA resolutions that call on States and regional fisheries management organisations to regulate bottom fisheries and implement measures in accordance with the precautionary approach and ecosystem approaches to fisheries management;

RECALLING that Article 6(1)(c) and (d) of the Southern Indian Ocean Fisheries Agreement (the Agreement) call on Contracting Parties, in giving effect to the objectives of the Agreement, to evaluate the impact of fishing on the fishery resources and on the marine environment, taking into account the environmental and oceanographic characteristics of the SIOFA Area of Application (the Agreement Area) and to adopt conservation and management measures (CMMs) necessary for ensuring the long-term conservation and sustainable use of the fishery resources in the Agreement Area; and

RECOGNISING Article 4(e) of the Agreement which requires Contracting Parties to apply the principle that fishing practices and management measures shall take due account of the need to minimise the harmful impact that fishing activities may have on the marine environment;

ADOPTS the following CMM in accordance with Article 6 of the Agreement:

1. The use of all large-scale pelagic driftnets¹ in the Agreement Area is prohibited for any vessel flying the flag of a Contracting Party, cooperating non-Contracting Party (CNCP) or participating fishing entity (PFE).
2. Contracting Parties, CNCPs and PFEs recommend that deepwater gillnets² not be used in the Agreement Area by any vessel flying the flag of a Contracting Party, CNCP or PFE until such time as the Meeting of the Parties has received a recommendation from the Scientific Committee.

¹ 'Large-scale pelagic driftnets' (drift gillnets) are defined as a gillnet or other net or a combination of nets which is more than 2.5 kilometres in length the purpose of which is to enmesh, entrap or entangle fish by drifting on the surface or in the water.

² 'Deepwater gillnets' (trammel net, set nets, anchored nets, sink nets) are defined as strings of single, double or triple netting walls, held vertically, usually on or near the seafloor, in which fish will gill, entangle or enmesh. Several types of nets may be combined in one gear. These nets can be used either alone or, as is more usual, in large numbers placed in line ('fleets' of nets). The gear can be set, anchored to the bottom or left drifting, free or connected with the vessel.

3. Nothing in this measure shall prevent Contracting Parties, CNCPs or PFEs from applying more stringent measures to large-scale pelagic driftnets not covered by this CMM, or to deepwater gillnets.

4. Until a Compliance Monitoring Scheme is adopted by the Meeting of the Parties, each Contracting Party, CNCP and PFE shall provide a report on its implementation of this CMM to the ordinary Compliance Committee meeting in 2017. In the event that the Compliance Committee does not meet in 2017, implementation reports shall be provided to the 2017 ordinary Meeting of the Parties. In the case of a State or fishing entity that becomes a Contracting Party, CNCP or PFE after this CMM enters into force, implementation reports shall be provided to the first Compliance Committee meeting after the Agreement enters into force for that State or their CNCP status or PFE status becomes effective.