

CMM 14a-2019

Conservation and Management Measure for Exploratory Fishing for Toothfish by New Zealand-Flagged Vessels in the SPRFMO Convention Area

(Supersedes CMM 4.14)

The Commission of the South Pacific Regional Fisheries Management Organisation;

RECALLING Article 22 of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean (the [Convention](#)) which provides that a fishery that has not been subject to fishing or has not been subject to fishing with a particular gear type or technique for ten years or more shall be opened as a fishery or opened to fishing with such gear type or technique only when the Commission has adopted cautious preliminary Conservation and Management Measures (CMMs) in respect of that fishery and, as appropriate, non-target and associated or dependent species, and appropriate measures to protect the marine ecosystem in which that fishery occurs from adverse impacts of fishing activities;

RECOGNISING Articles 3(1)(a)(i) and (ii) of the Convention, which call on the Commission, in giving effect to the objectives of the Convention, to adopt CMMs that take account of international best practices and protect the marine ecosystem, particularly ecosystems with long recovery times following disturbance;

FURTHER RECOGNISING Articles 3(1)(b) and (2) of the Convention which call on the Commission to apply the precautionary approach and an ecosystem based approach to fishery resources under the mandate of the Convention;

NOTING the conservation value of relevant SPRFMO CMMs which will apply to activities anticipated to be undertaken pursuant to this measure, including, *inter alia*, CMM 03-2019 (Bottom fishing) and CMM 09-2017 (Seabirds);

AGREEING that new and exploratory fisheries should not be permitted to expand faster than the acquisition of information necessary to ensure that the fishery can and will be developed in accordance with the principles set out in Article 3 of the Convention;

RECOGNISING Article 22(2) of the Convention, which calls on the Commission to adopt preliminary measures that ensure that any new fishery resource is developed on a precautionary and gradual basis until sufficient information is acquired to enable the Commission to adopt appropriately detailed CMMs;

NOTING that at its fourth meeting the SPRFMO Commission approved New Zealand's proposal ([CTC-03-09](#)) to conduct exploratory bottom longline fishing during 2016 and 2017 for toothfish, limited to 30 tonnes per year.

FURTHER NOTING that at its sixth meeting, the Scientific Committee assessed New Zealand's updated proposal ([SC6-DW03_rev2](#)) to conduct additional exploratory bottom longline fishing during 2019, 2020, and 2021 for toothfish, limited to 220 tonnes greenweight retained annually. In its report, the [Scientific Committee](#):



1. *Noted* New Zealand's proposal and its Fisheries Operation Plan to extend its exploratory demersal longline fishery for toothfish (limited at 220 tonnes liveweight (= greenweight) retained annually);
2. *Recognised* the cautious, exploratory nature of the proposal;
3. *Recognised* the scientific benefits of the proposed data collection, especially for understanding the distribution, movement, spawning dynamics, and stock structure of toothfishes and can be used to support the CCAMLR stock assessment models for Antarctic toothfish;
4. *Agreed* that data and analyses from New Zealand's exploratory fishing continue to be shared in a timely manner with CCAMLR;
5. *Agreed* that a spatial stratification, consistent with CCAMLR's, should be accepted by SPRFMO for this exploratory fishery for toothfish to facilitate the collection and sharing of data and a similar approach be considered for any future exploratory fisheries for toothfish;
6. *Adopted* the Data Collection Plan included in the revised proposal;
7. *Advised* the Commission that the revised proposal is acceptable in terms of Articles 2 and 22, CMM13-2016 (Exploratory fisheries), CMM03-2018 (Bottom fishing), and the BFIAS.
8. *Advised* that the proposal adequately addressed 5 out of 5 relevant criteria contained in paragraph 10 of CMM 13-2016 (Exploratory fisheries).
9. *Recommended* that the assessment is adequate given relevant CMMs and that the revised proposal adequately addressed 8 out of 8 relevant criteria for paragraph 8 of CMM 13-2016 (Exploratory fisheries).
10. *Recommended* observer data be provided 30 days prior to the Scientific Committee meeting.

ADOPTS the following CMM in accordance with Articles 8, 20 and 22 of the [Convention](#):

Objectives

1. To provide for exploratory bottom longline¹ fishing for toothfish in the Convention Area for the purpose of obtaining scientific data to support the following objectives:
 - a) Continue to map the bathymetry of the fishable area (shallower than about 2500 m) in mid-Pacific to the north of the SPRFMO-CCAMLR boundary;
 - b) Document the spatial distribution, catch rates, and relative abundance of Antarctic and Patagonian toothfish in apparently suitable habitat to the north of CCAMLR Areas 88.1 and 88.2 by latitude, area, and depth;
 - c) Characterise the biology, life history and spawning dynamics of toothfish in the area;
 - d) Tag substantial numbers of toothfish for stock linkage and life history studies, and, potentially, for use in a multi-area CCAMLR stock assessment model and for biomass estimation;
 - e) Collect information on distribution, relative abundance, and life history of bycatch and other associated or dependent species;
 - f) Collect toothfish eggs using plankton net tows if practical;
 - g) Conduct Continuous Plankton Recorder (CPR) tows for planktonic studies and potentially for fish eggs; and
 - h) Collect acoustic data using existing procedures as carried out within the CAMLR Convention Area.

¹ Also referred to as demersal longline.



Definitions

2. For the purposes of this measure:
 - a) “toothfish” means both Patagonian toothfish (*Dissostichus eleginoides*) and Antarctic toothfish (*Dissostichus mawsoni*);
 - b) “bottom longline” means standardised integrated weight bottom longline gear as specified in the [CCAMLR Gear Library](#).

Application

3. This measure applies to exploratory fishing for toothfish as described in [SC6-DW03_rev2](#) “Proposal for exploratory bottom longlining for toothfish by New Zealand vessels, 2019-2021: Fisheries Operation Plan, suggested Data Collection Plan, and impact assessments”.
4. None of the obligations in this measure exempt a Member or CNCP from complying with any Convention obligation or any other CMMs adopted by the Commission.

Details and Specification of Exploratory Fishing Activities

5. Fishing for toothfish, using the bottom longline method, may be conducted in the exploratory fishing strata identified in Table 1 below.

Table 1: Corner positions for the four exploratory fishing strata

Exploratory fishing stratum	Latitude	Longitude
L	56° 00.0' S	155° 00.0' W
	56° 00.0' S	150° 00.0' W
	60° 00.0' S	150° 00.0' W
	60° 00.0' S	155° 00.0' W
M	56° 00.0' S	145° 00.0' W
	56° 00.0' S	150° 00.0' W
	60° 00.0' S	145° 00.0' W
	60° 00.0' S	150° 00.0' W
N	52° 00.0' S	140° 00.0' W
	52° 00.0' S	145° 00.0' W
	60° 00.0' S	140° 00.0' W
	60° 00.0' S	145° 00.0' W
O	52° 00.0' S	135° 00.0' W
	52° 00.0' S	140° 00.0' W
	60° 00.0' S	135° 00.0' W
	60° 00.0' S	140° 00.0' W

6. The first exploratory trip each year may occur any time in 2019, 2020, and 2021, with a maximum of four trips each year, with some of the trips between August and October each year to characterise post-spawning dynamics. The remainder of the trips between March and October will provide additional information on spawning dynamics, distribution, and movement patterns.
7. The Scientific Committee will review results each year at its annual meeting and advise the Commission on progress, including whether any stock indicators show sustainability concerns and what, if any, additional measures might be required to restrict the likely bycatch of deepwater sharks or other non-target species.



Total Allowable Catch

8. The annual toothfish total allowable catch shall not exceed 140 tonnes (greenweight) in each of 2019, 2020, and 2021 unless the Scientific Committee at its 2019 or 2020 meetings advises for a lower TAC. Fish that are tagged and returned alive to the sea shall not be counted against this limit. The annual catch limit of 140 tonnes will allow the collection of a significant amount of scientific information, will also allow for an adequate number of tagged fish to be returned to the sea and was calculated based on the same methodology used in nearby CCAMLR exploratory fisheries. This is a precautionary approach, and supports the need to understand other risks such as interactions with seabirds and marine mammals.
9. The catch limit was determined based on a design approach with the following considerations:
 - a) A minimum of three strata should be surveyed with a maximum catch limit of 40 t per stratum to ensure geographic spread if catch rates are high in one or more strata;
 - b) At least 10 sets, in at least 3 clusters, in each stratum fished, ice and operating conditions permitting;
 - c) Clusters of no more than 5 sets will be separated by at least 10 nm (calculated as the minimum distance between any part of any set in any two clusters);
 - d) Clusters of sets will not be within 10 nm of a cluster already set within a voyage or fishing season (pre- and post-spawning)
 - e) Some sets will be toward the deeper end of the expected depth range for toothfish (deeper than 2200 m), contingent on ice and other operating conditions and the risk of the backbone line snagging the bottom;
 - f) A maximum combined catch limit of 140 tonnes live weight;
 - g) No more than 70 t of toothfish catch to be taken by one vessel;
 - h) To the extent practical, similar locations to be fished pre- and post-spawning to facilitate separation of spatial and seasonal trends;
 - i) No more than 50% of a vessel's allocated catch over the three years of this CMM shall be taken outside the post-spawning period August to October.
10. Catch and effort shall be monitored on a shot-by-shot basis and fishing operations will cease in that year or stratum once any of the limits in paragraphs 8 and 9 have been caught.
11. Because the stock and stock status are not completely known, if, during the exploratory fishing, the stock indicators show sustainability concerns, the exploratory fishing should cease.
12. The companies and crews of the proposed vessels shall have experience working to restrictive catch limits and use intensive monitoring of catch retained. As the catch limit of 140 tonnes is approached, the following measures to constrain the retained catch within the relevant limit(s) shall be considered:
 - a) shorter lines will be set;
 - b) a seawater tank will be maintained on board such that live fish in good condition can be retained in case they need to be tagged and returned to meet the catch limit;
 - c) the tagging rate will be progressively increased.
13. Fishing activity undertaken pursuant to this measure will not be considered to be a precedent for future allocation decisions.



Authorised Vessels

14. The vessels *San Aspiring*, and *Janas* shall be authorised to undertake fishing pursuant to this measure. In the event that *San Aspiring* or *Janas* are unavailable, an alternate vessel of similar capability and capacity shall be authorised to undertake fishing pursuant to this measure only after the vessel has been notified by New Zealand to the Executive Secretary.
15. In determining the suitability of an alternate vessel New Zealand shall consider, *inter alia*:
 - a) the vessel's ability to conduct the exploratory fishing proposed in paper [SC6-DW03_rev2](#);
 - b) the master and crew's history and track record in comparable research or exploratory fishing;
 - c) the ability of the vessel to provide suitable accommodation, facilities, and operating support for a New Zealand observer;
 - d) the ability of the vessel to maintain rigorous mitigation of risks to seabirds and marine mammals;
 - e) any history of Illegal, Unreported or Unregulated (IUU) fishing by the vessel. A vessel on the SPRFMO IUU list or the IUU list of another competent regional fisheries management organisation shall not be accepted as an alternate vessel.

Management Measures

16. Fishing pursuant to this measure shall only take place in accordance with [SC6-DW03_rev2](#) "Proposal for exploratory bottom longlining for toothfish by New Zealand vessels, 2019-2021: Fisheries Operation Plan, suggested Data Collection Plan, and impact assessments".
17. Because of the likelihood of shared stocks of toothfish, fishing pursuant to this measure shall, as far as possible, be conducted consistent with relevant measures in force in the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) Area, including the following:
 - a) CCAMLR's protocol for research longline fishing on small, isolated features (see [CM 41-10](#), 2014). For consistency with CCAMLR surveys in adjacent areas, the following rules shall apply:
 - i. clusters of IWL lines are allowed with no rules for minimum separation between lines;
 - ii. no more than 6,900 hooks shall be set in a line;
 - iii. no more than 17,250 hooks shall be set in a cluster;
 - iv. clusters of lines shall be no closer together than 10 nautical miles (measured from the proximate lines of each individual cluster).
 - b) A minimum tagging rate of three fish of each *Dissostichus* species per greenweight (live weight) tonne shall be implemented. The rules applied by CCAMLR in the immediately adjacent 88.1 A&B North region, where tagged fish were released starting in early 2015, shall be applied ([CM 41-01 Annex C](#)). These rules require a minimum overlap statistic (a comparison between the observed length frequency from vessel biological information and the size composition of fish returned alive with tags, see [CCAMLR's calculator](#)) of at least 60% once 30 or more *Dissostichus* of a species have been successfully released with tags.
18. Standardised integrated weight bottom longline gear (IWL, see the [CCAMLR gear library](#)) shall be used for all fishing pursuant to this measure.
19. If 250 kg or more of deepwater sharks (all species in class Chondrichthyes combined on all lines within the cluster) are caught in a cluster of lines, then no further clusters will be set within 10 nm of the location of that cluster until the information from that voyage has been reviewed by the Scientific Committee.



Data Collection

20. In undertaking fishing pursuant to this measure the vessel shall, to the extent possible, collect all the data as set out in the paper submitted to the Scientific Committee ([SC6-DW03_rev2](#)) and any further data requested by the Scientific Committee for its annual evaluation and assessment.
21. Any vessel authorised to undertake fishing pursuant to this measure shall be fully capable of complying with SPRFMO data standards and reporting and CCAMLR [CM 22-07 \(2013\)](#) related to encounters with potential VMEs. New Zealand will submit all data at least to the standard required by [CMM 02-2018](#) (Data Standards). In addition, the government observer aboard each vessel shall complete, in full, the CCAMLR fine-scale catch and effort data form C2 for longline fishing using standard FAO codes.

Marine Mammals, Seabirds, Turtles, and other Species of Concern

22. A vessel fishing pursuant to this measure shall use the following mitigation methods:
 - a) the vessel shall use integrated weight line as described in the [CCAMLR gear library](#) with a weighting of 50 g of lead per metre of backbone line;
 - b) there shall be no dumping of offal while lines are being set or while lines being hauled;
 - c) any offal or discards shall be macerated by machine prior to discarding;
 - d) discarding shall take place only at the end of a haul or while steaming; and no biological material shall be discarded for at least 30 minutes before the start of any set or during any set;
 - e) discarding may only take place from the opposite side of the vessel from the hauling position;
 - f) a bird exclusion device (BED) shall be used to prevent birds entering the hauling area, to the extent allowed by prevailing weather;
 - g) other methods such as water spray, movement, et cetera, shall be used as appropriate to deter aggressive feeders from approaching the line.
23. The following information shall be collected for marine mammals, seabirds, turtles, and other species of concern:
 - a) At least one standardised seabird and marine mammal abundance count shall be made at the rear of the vessel during the setting of each line and again during the hauling of each line;
 - b) Other opportunistic observations, photography and identification of marine mammals shall be undertaken in collaboration with crew;
 - c) the observer shall have a target of observing 10% of hooks hauled for marine mammal, seabird and turtle captures, and for comparison with a sample of recorded video observations;
 - d) at least 50% of hooks hauled shall be viewed on recorded video after the voyage;
 - e) all marine mammals, seabirds, turtles, and other species of concern captured shall be identified, and photographs taken of all live birds released and any birds colliding with the ship that can be recovered;
 - f) all dead birds shall be retained for formal identification and necropsy.
24. All information specified in CMM 03-2019 (Bottom Fishing) relating to bottom fisheries and all data necessary to assess encounters with VMEs shall be collected to enable assessment and monitoring of the distribution of marine ecosystem in the areas fished.



Monitoring

25. A vessel undertaking fishing pursuant to this measure shall carry a New Zealand Government observer, as well as a dedicated assistant experienced in at-sea scientific data collection to assist the observer with biological measurement and data collection. Observer data shall be collected in accordance with the SPRFMO Observer data standard and shall include gear deployment and retrieval data, catch and effort information, biological data collection, and information on marine mammals, seabirds, reptiles and other species of concern.
26. In addition to carrying an observer, a vessel undertaking fishing pursuant to this measure shall be equipped with a video monitoring and recording system to be located over the hauling position to ensure that all hauled lines and hooks are observed or recorded on video. All recorded footage must be provided to the New Zealand Ministry for Primary Industries at the end of the voyage for analysis and storage.
27. The vessel shall also be equipped with several tamperproof Automatic Location Communicators that meet SPRFMO standards for VMS reporting (as per [CMM 06-2018 \(Commission VMS\)](#), at least every 2 hours) and can respond to polling at any rate if required.

Review

28. This CMM shall expire following the regular meeting of the Commission in 2022.
29. The exploratory fishery to which this CMM applies may be extended through the development of a new CMM, pursuant to CMM 13-2019 (Exploratory Fisheries) or any other CMM that the Commission adopts that outlines a framework for the management of exploratory fisheries in the SPRFMO Area.