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Managing Scientific research in the SPRFMO Convention Area: Proposal and rationale for Intersessional Discussion

New Zealand

(Including comments from Peru, Australia, the EU and the USA)

Managing scientific research in the SPRFMO Convention Area

Proposal and rationale for Intersessional Discussion

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Contents

Purpose	3
Process to date.....	3
SPRFMO Convention	3
Relevant SPRFMO Convention definitions.....	4
Issue Summary	5
Proposal	5
Definitions	5
Scientific Research	5
Fishing for fisheries resources for scientific purposes.....	6
Process and Requirements	6
Scientific Research	6
Fishing for fisheries resources for scientific purposes.....	6
Key Outstanding Issues	7
Need for a Conservation and Management Measure	7
Definition of ‘fishery resources’	7
Defining scientific research categories	7
Defining requirements for categories.....	7
Recommendations:	8
Appendix I: Hypothetical examples to demonstrate application:	9
Continuous Plankton Recorder	9
Benthic biodiversity survey.....	9
Acoustic survey	9
Depletion experiment.....	10
Tagging studies.....	10
Trawl survey.....	11
Appendix II: Feedback from Intersessional Working Group	12

Purpose

This paper is intended to provide an update on progress towards development of a Conservation and Management Measure to promote scientific research in the SPRFMO Convention Area, including a proposal to establish procedures for the conduct of fishing for fishery resources for scientific purposes in the SPRFMO Convention Area. Some hypothetical examples are provided in Appendix I to illustrate possible application of the proposed framework.

Process to date

New Zealand provided an initial discussion paper to SC6 ([SC-Doc32](#)) which resulted in a recommendation from the Scientific Committee that the Commission adopt a Conservation and Management Measure to provide for research activities in the Convention Area taking into account the following key principles:

- Research should be enabled within sustainable limits.
- Different types of research should be recognised and considered in terms of the risks and opportunities for the fishery resources managed by the SPRFMO Convention.

A proposal was then taken to the 7th Commission meeting ([COMM7-Prop15](#) and [COMM-Prop15.1](#)). The proposed CMM was withdrawn at the Commission meeting with an intersessional working group led by New Zealand formed to progress the proposal.

New Zealand has provided two documents for discussion to the intersessional working group and has received extensive and conflicting feedback from SPRFMO Members on the most recent discussion paper which was distributed for feedback in early August.

Wherever possible, comments have been incorporated into this paper, outstanding issues that require further discussion are specified following the proposal. Marked-up versions of the last discussion paper from the intersessional working group are attached as Appendix II.

SPRFMO Convention

The objective (Article 2) of the SPRFMO Convention is, through the application of the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources occur.

Article 8 of the SPRFMO Convention identifies one of the functions of the Commission as being to:

d) *“promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and of the same fishery resources in adjacent waters under national jurisdiction, and, in collaboration with the Scientific Committee, establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.”*

This identifies two roles for the Commission:

1. to promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and adjacent waters under national jurisdiction; and, when such research requires fishing in the Convention Area,

2. in collaboration with the Scientific Committee, to establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area

Based on the objective of the Convention and the text above, we propose that the focus of the Conservation and Management Measure for the promotion of scientific research in the SPRFMO Convention Area be on defining and setting clear and simple notification procedures for the conduct of scientific research as considered necessary, and defining and establishing procedures for the conduct of scientific research that may require fishing for fishery resources for scientific purposes in the Convention Area.

Relevant SPRFMO Convention definitions

Fishing is defined as:

- I. *The actual or attempted searching for, catching, taking or harvesting of fishery resources;*
- II. *Engaging in any activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources for any purpose;*
- III. *Transshipment and any operation at sea in support of, or in preparation for, any activity described in this definition; and*
- IV. *The use of any vessel, vehicle, aircraft or hovercraft, in relation to any activity described in this definition.*

Note that clause II would include activities like acoustic surveys of fish, even if there were no nets in the water, as that would result in the locating of fishery resources.

Fishery resources are defined as:

All fish within the Convention Area, including: molluscs; crustaceans; and other living marine resources as may be decided by the Commission; but excluding:

- I. *sedentary species in so far as they are subject to the national jurisdiction of coastal States pursuant to Article 77 paragraph 4 of the 1982 Convention;*
- II. *highly migratory species listed in Annex I of the 1982 Convention;*
- III. *anadromous and catadromous species and*
- IV. *marine mammals, marine reptiles and sea birds.*

This is an area where Member views differ. Some Members interpret ‘fishery resources’ to include only those species that are explicitly included (e.g. fish, molluscs, and crustaceans), and any that the Commission has decided should also be considered as ‘fishery resources’. Other Members interpret the definition more openly, considering that all marine living organisms, with the exception of the exclusions in I-IV, are to be considered fishery resources.

An example of where this complicates matters is in the interpretation of whether plankton is a ‘fishery resource’. For example, many planktonic animals are crustaceans (copepods, euphausiids, etc.) and the eggs and larvae of many fish and cephalopods, including those of the main SPRFMO target species, are planktonic. All are susceptible to capture in plankton sampling devices.

Fishing vessel is defined as:

Any vessel used or intended for fishing, including fish processing vessels, support ships, carrier vessels and any other vessel directly engaged in fishing operations.

We note that there is no differentiation in the definition of ‘fishing vessel’ between a research vessel that has the capacity to take fish, and a commercial fishing vessel.

New or Exploratory Fisheries (Article 22)

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...

Note that there is no explicit definition of the term ‘fishery’, which does not allow for easy differentiation between scientific research and new / exploratory fisheries.

Issue Summary

In our view, a Conservation and Management Measure to promote the conduct of scientific research is required to:

- differentiate between:
 - scientific research in the broader sense;
 - scientific research that needs to conduct fishing for fishery resources for scientific purposes; and
 - new or exploratory fisheries, which will not be managed through this CMM; and
- ensure cooperation in scientific research is encouraged and promoted; and
- establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Proposal

We propose a Conservation and Management Measure that defines ‘scientific research’ and ‘fishing for fishery resources for scientific purposes’, and sets out clear processes, requirements, and the role of the Scientific Committee in each.

Definitions

Any Conservation and Management Measure intending to establish procedures for fishing for fishery resources for scientific purposes will require clear definitions of ‘Scientific Research’, and for various categories of fishing for fishery resources for scientific purposes.

Several categorisation approaches have been proposed, including an initial categorisation based on the quantity of fishery resource expected to be taken, or the amount of potential impact/risk the scientific research would have on the ecosystem and fishery resources of the Convention.

Proposed definitions are:

Scientific Research

It is proposed that ‘scientific research’ be defined as vessel-based activities collecting data and information that EITHER:

- i) do not entail the take of any fisheries resources; OR
- ii) will not result in the sale of any fisheries resources taken (for the duration of the survey voyage); OR
- iii) are carried out entirely within any current SPRFMO catch limits, national allocations, and in compliance with all relevant Conservation and Management Measures

Fishing for fisheries resources for scientific purposes

It is proposed that fishing for scientific research purposes be defined as vessel-based activities in a current Management Area or within an existing fishery that EITHER:

- i) requires exemption from any SPRFMO Conservation and Management Measure; OR
- ii) entails, or can reasonably be expected to entail, the catch and sale of any fishery resources in excess of any current SPRFMO catch limit or national allocation.

These definitions are virtually the same as those recently proposed to the intersessional working group. Feedback received generally focused on including more detailed descriptions of the categories for clarity (Appendix II).

Process and Requirements

Scientific Research

It is proposed that scientific research should be notified to the SPRFMO Secretariat at least 14 days prior to the commencement of any research. The notification should include a copy of the research/survey plan, which should, at a minimum, include: details on the vessel(s) involved; the location of the research; the objectives of the research; the maximum expected catch (by species if these include target species for substantive SPRFMO fisheries); the expected total bottom contact area (footprint); and the expected timeframe for the research.

It is proposed that Members be able to provide a multi-year (up to 3-5 years) notification for scientific research, in particular, annual activities like towing continuous plankton recorders during transit through the Convention Area.

All scientific research activities should also be summarised in a Member's Annual Report to the Scientific Committee. This information will be summarised by the Secretariat annually to encourage and promote cooperation in research.

Fishing for fisheries resources for scientific purposes

It is proposed that, given the potential for catch limits to be exceeded or the requirement for exemptions to Conservation and Management Measures, a more rigorous process be put in place to ensure that fishing for scientific purposes does not threaten the long-term conservation and sustainable use of fishery resources or the marine ecosystems in which the resources occur.

It is proposed that fishing for scientific purposes should require recommendation by the SPRFMO Scientific Committee and approval by the Commission before commencing.

This would require the submission of a fishery research plan to the Scientific Committee for review at its annual meeting. The fishery research plan proposal would include, and Scientific Committee would assess against the following criteria:

- i. Consistency of the research objective(s) with the objective of the SPRFMO Convention and the work plan of the Scientific Committee;
- ii. Likelihood of the research to achieve its objective(s);
- iii. Sustainability of proposed levels of catch; and
- iv. Any expected impact on the wider marine ecosystem.

Where the Scientific Committee considers the research will contribute to the sustainable management of SPRFMO fishery resources, it will provide a recommendation to the Commission, and consider the research when providing advice on relevant catch limits.

Where the Scientific Committee considers a proposal is not consistent with the criteria or is unlikely to achieve the stated objectives, it can recommend to the Commission that the proposal not go ahead, or that no specific allowance be made within (or in addition to) any catch limit for the research, or that the proponents re-submit a revised proposal to the next Scientific Committee meeting.

This process is intended to give the Scientific Committee oversight on research activities that may impact on the sustainability of fisheries resources or the marine ecosystems in which these resources occur, to provide quality assurance on proposals, and also to ensure that there is a mechanism for the promotion of important research, including in areas with low catch limits.

If any exemptions are requested from SPRFMO Conservation and Management Measures, the plan should also be considered by the Compliance and Technical Committee before progressing to the Commission to ensure that there are no unacceptable technical or compliance risks that arise from the research proposal.

Key Outstanding Issues

Need for a Conservation and Management Measure

Some Members do not consider that a Conservation and Management Measure is required to promote the conduct of scientific research. The primary purpose in proposing a CMM is for the SPRFMO Commission to establish procedures for fishing for fishery resources for scientific purposes in advance of there being an explicit need to do so. However, it may be possible to agree and document such procedures without the need for an explicit CMM.

Definition of 'fishery resources'

There are different interpretations of Article 1(f) of the Convention, with some interpreting 'fishery resources' to include only those species that the Commission has decided are 'fishery resources'. As an example, some Members consider plankton to be a fishery resource whereas others consider that it hasn't been decided by the Commission and therefore it is not a 'fishery resource'.

Defining scientific research categories

The current proposed categories for defining scientific research and fishing for fisheries resources for scientific purposes were generally supported, although there were a number of comments on the difficulty of using 'sale of/commercial use' of the fisheries resources as a defining characteristic.

In addition, there were concerns about accidental inclusion of other activities (e.g. commercial fishing, observer sampling) in the definition of scientific research that would introduce a new requirement for notification in advance of those activities.

It may be possible to address this through the definition of scientific research or through changing the requirements for scientific research to remove the notification requirement, noting that this reduces the likelihood for collaboration and removes some transparency from scientific research being done in the Convention Area.

Defining requirements for categories

A number of comments were received on the requirement to notify all scientific research to the Secretariat at least 14 days prior to commencement of the scientific research. The intent of the

notification is to increase transparency, however we would be interested in the views of other Members on how to ensure transparency of scientific research activities.

For fishing for fishery resources for scientific purposes, there seemed to be general support for the proposed process, and a number of comments were made about developing a 'checklist', similar to that developed to evaluate exploratory fishery proposals last year.

Recommendations:

It is recommended that the Scientific Committee:

- Discuss and resolve the issues identified during intersessional work;
- **Agree** that a CMM to promote scientific research and to establish procedures for the conduct of fishing for fishery resources for scientific purposes should be established for the SPRFMO Convention Area

Appendix I: Hypothetical examples to demonstrate application:

Continuous Plankton Recorder

A commercial fishing vessel transiting the SPRFMO Convention Area will tow a continuous plankton recorder to collect information on productivity in the South Pacific Ocean.

The quantity of fishery resources (planktonic organisms) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

The flag state would be required to ensure the vessel is on the registered list of vessels, the Secretariat is notified at least two weeks (14 days) in advance of the first trip, and the flag state will report on the research in its Annual Report to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work given the quantity of fishery resource expected to be taken is low and of negligible commercial value.

Benthic biodiversity survey

A research or fishing vessel is intending to carry out a survey of benthic biodiversity in the SPRFMO Convention Area. The survey will include the use of epibenthic sled sampling, Deep Towed Imaging System (DTIS) camera transects, and grab sampling over a wide area of the Convention Area.

The quantity of fishery resources (sedentary benthic species) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

However, as benthic species are considered a fishery-resource, and the use of an epibenthic sled or grab sampling could be described a gear likely to come in contact with the seafloor or benthic organisms, this research would be required to comply with CMM-03-2019.

As such, the research would only be able to be undertaken within the Management Areas currently defined in CMM-03-2019 unless an exemption were requested, in which case the research would need to be considered by the Scientific Committee, Compliance and Technical Committee, and Commission.

Therefore, this would be considered 'fishing for scientific purposes', and a fishing research plan would need to be submitted to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work, however any activities of the vessel that may occur on the same trip (e.g. commercial fishing during the same voyage) would be considered by the SC, CTC, and Commission during consideration of the research plan.

Acoustic survey

A research vessel is intending to carry out an acoustic survey for jack mackerel within the Convention Area.

As acoustic surveying requires only minimal sampling of fishing to allow for interpretation of the acoustic data, this survey would be expected not to take commercial quantities of any fishery resource and would therefore be considered 'scientific research'.

Alternately, if the survey required the taking of commercial quantities of catch but all catch was accounted for within a Members' allocation and activities were entirely consistent with existing CMMs, this would also be considered 'scientific research'.

A commercial fishing vessel is intending to carry out an acoustic survey for orange roughy entirely within Management Areas, and accounting for all catch within a Member state allocation.

This would be considered scientific research, as all catch is accounted for and the work will be carried out entirely within the scope of current SPRFMO CMMs.

A commercial fishing vessel has been commissioned to carry out an acoustic survey for orange roughy entirely within Management Areas, but in an area where the catch limit is too low for the Member to account for catch within its national allocation.

The quantity of catch required to be taken for an orange roughy acoustic survey is not necessarily a commercial quantity. However, sampling for a survey is required to be done on the aggregation that has been surveyed. Towing on dense aggregations of orange roughy results in variable levels of catch, and it can be difficult to limit the quantity of fish taken. In addition, the vessel may fish in other areas (where more allocation is available) which would result in a commercial quantity of catch to be taken.

This research would therefore be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

Comment: This scenario is somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Depletion experiment

A commercial vessel is proposing a depletion experiment whereby they plan to estimate the biomass of one or more fish species associated with underwater topographical features within existing bottom line fishing areas

Because a depletion experiment requires sufficient catch to be taken to suppress catch rates substantially within an area, the quantity of catch required is likely to be relatively large compared with current low catch limits for bottom fishing species other than orange roughy. Thus, the catch is very likely to be sold, and it is possible that catch in excess of a Member's allocation may be required.

If the depletion experiment was conducted using bottom line fishing methods, this experiment would be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

If the depletion experiment was conducted using an entirely different method (such as potting or trapping), this experiment would be considered a new or exploratory fishery, and the proponents would be required to follow the procedures specified in CMM-13-2019.

Comment: Both scenarios are somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Tagging studies

A Member state is proposing that its commercial fishing vessels will carry out tagging studies on jack mackerel, releasing live tagged fish after their capture.

Assuming that there is not currently any 'landings obligation' in SPRFMO, the return of tagged fish to the sea would not be inconsistent with any SPRFMO CMMs. However, it may require clarification in regards to the reporting requirements (CMM02-2018).

Given that this research would not be expected to result in any take of fishery resources outside of Member allocations, and would not require any exemptions from CMMs, this would be considered 'scientific research'.

Trawl survey

A Member state is proposing that a research vessel carry out a trawl survey focused on estimating abundance of squid in the SPRFMO Convention Area.

Provided that the Member state is intending to report all catch of squid and other associated species in a manner consistent with the data standard (CMM-02-2018), and comply with all other relevant CMMs, this would be considered scientific research and require only notification to the Secretariat and reporting in the Member's Annual Report.

Appendix II: Feedback from Intersessional Working Group



Appendix 2
SC-07-Doc24-Draft Re



Appendix 2_US edits
SC-07-Doc24-Draft Re

Appendix II: Feedback from Intersessional Working Group

Comments from Peru:

Managing scientific research in the SPRFMO Convention Area

Proposal and rationale for Intersessional Discussion

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Commented [JC1]: As noted before, we insist on that we need to specify 'scientific research' in the title and throughout the document, as opposed to just using 'research'. This to be better in line with the wording in Article 8(d) of the Convention, which is or should be the main statement from the Convention guiding the development and eventual implementation of the proposed CMM. This will also ensure a clearer and cleaner distinction between the type of research for purely scientific research purposes (as done with scientific research vessels or with properly staffed and equipped fishing vessels, where the only and/or primary objective is to assess the state of one or more fishery resources or gain scientific knowledge on them, and not to have an immediate commercial gain or profit); and the more commercially oriented research (as done on board fishing vessels as part of a regular monitoring process of regular fishing operations, or as limited *ad-hoc* fishing operations to test or assess the feasibility of conducting a commercially viable fishery with a given gear and/or on a given fishery resource, with the primary objective of having a commercial gain or profit).

Contents

Purpose	3
SPRFMO Convention	3
Relevant SPRFMO Convention definitions	3
Issue Summary	4
Proposal	4
Definitions	4
Scientific Research	4
Fishing for scientific purposes	15
Scientific Research	6
Fishing for scientific purposes	8
Working through some hypothetical examples:	8
Continuous Plankton Recorder	8
Benthic biodiversity survey	9
Acoustic survey	9
Depletion experiment	10
Tagging studies	10
Trawl survey	11

Purpose

This paper is intended to provide context and information to the intersessional working group regarding the rationale and key considerations in the development of a Conservation and Management Measure (CMM) to promote scientific research in the SPRFMO Convention Area.

SPRFMO Convention

The objective (Article 2) of the SPRFMO Convention is, through the application of the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources occur.

Article 8 of the SPRFMO Convention identifies one of the functions of the Commission as being to:

d) “promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and of the same fishery resources in adjacent waters under national jurisdiction, and, in collaboration with the Scientific Committee, establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.”

This identifies two **functions** complementary roles for the Commission:

- 1) to promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and adjacent waters under national jurisdiction; and, when such research requires fishing in the Convention area,
- 2) to, in collaboration with the Scientific Committee, establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area

Based on the objective of the Convention and the text above, we propose that the focus of the Conservation and Management Measure for the promotion of scientific research in the SPRFMO Convention Area be on defining and setting clear and simple notification procedures for the conduct of scientific research if needed, and defining and establishing procedures for the conduct of scientific research that may require fishing for fishery resources for scientific purposes in the Convention Area.

Relevant SPRFMO Convention definitions

Fishing is defined as:

- I. The actual or attempted searching for, catching, taking or harvesting of fishery resources;
- II. Engaging in any activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources for any purpose;
- III. Transshipment and any operation at sea in support of, or in preparation for, any activity described in this definition; and
- IV. The use of any vessel, vehicle, aircraft or hovercraft, in relation to any activity described in this definition.

Fishery resources are defined as:

All fish within the Convention Area, including: molluscs; crustaceans; and other living marine resources as may be decided by the Commission; but excluding:

Commented [JC2]: The first sentence in Article 8 paragraph (d) is the one that describes the main function of the Commission with regards to scientific research (*i.e.*: to promote it). While the second part of the paragraph deals with the special case where conducting the scientific research (...that is to be promoted) requires fishing for fishery resources for scientific purposes. And deals with it by postponing or transferring part of the responsibility for dealing with that special case to the collaboration with the Scientific Committee. Therefore, these two instances should not be treated as separate function, but as one being complementary of the other under the special case where fishing is required.

Commented [JC3]: As explained above, and also below, the attempt to define “scientific research” as opposed to “fishing for scientific purposes” is not a very fortunate one and may be misleading. Mainly because scientific research activities that don’t require the catching, removal or fishing of living marine organisms considered as “fishery resources” by the Convention or by the Commission don’t fall under the mandate of the terms of the Convention and, therefore, don’t need to be included in the proposed CMM. There is a whole range of scientific research activities (using vessels, towed devices, drifting devices, buoys, remote sensors, etc.) that need to remove nothing from the sea, or that may need to take samples (*e.g.*: of sea water for physical & chemical analyses) without the need or the intent to remove anything considered as a “fishery resource”, or part of it. It is therefore our understanding that vessels doing this type of scientific research not requiring fishing for, or removing any “fishery resource” are not supposed to fall under the sphere of influence of the SPRFMO Convention regulations that deal with fishing in the Convention area. Unless the Commission decides that, for instance, mapping the sea surface or vertical salinity and temperature of the ocean is to be interpreted as ‘fishing’ because it “can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources” (as per the definition in Art. 1(g)(iii)), vessels undertaking the above type of scientific research (without removing fishery resources) are not required to comply with CMM 05-2019 (Commission Record of Vessels) or other SPRFMO regulations and, therefore, will be pretty awkward to include them under the mandate of the SPRFMO a CMM on research.

Commented [JC4]: This very first sentence of Article 1(f) defines ‘fishery resources’ as meaning all fish within the Convention Area, including the other two most common large taxonomic groups (molluscs and crustaceans) being exploited commercially. The Convention doesn’t specify other taxonomic groups, and leaves it up to the Commission to decide if more species types or taxonomic groups are to be added to this definition by adding at the end of this paragraph that “...other living marine resources [...may be added] as may be decided by the Commission”.

- I. sedentary species in so far as they are subject to the national jurisdiction of coastal States pursuant to Article 77 paragraph 4 of the 1982 Convention;
- II. highly migratory species listed in Annex I of the 1982 Convention;
- III. anadromous and catadromous species and
- IV. marine mammals, marine reptiles and sea birds.

Based on these definitions, any activity that can be reasonably expected to catch marine resources (e.g. copepods, plankton, sponges, squid, anchovy) counts as fishing.

Fishing vessel is defined as:

Any vessel used or intended for fishing, including fish processing vessels, support ships, carrier vessels and any other vessel directly engaged in fishing operations.

New or Exploratory Fisheries (Article 22)

“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...”

Note that there is no explicit definition of the term ‘fishery’, which does not allow for easy differentiation between research and new / exploratory fisheries.

Issue Summary

In our view, a Conservation and Management Measure to promote the conduct of scientific research is required to:

- differentiate between scientific research in the broader sense; scientific research that needs to conduct fishing for fishery resources for scientific purposes; and, new or exploratory fisheries which will not be (...or don’t need to be) part of this CMM;
- ensure cooperation in scientific research is encouraged and promoted; and
- establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Proposal

We propose a Conservation and Management Measure that defines ‘scientific research’ and ‘fishing for fishery resources for scientific purposes’, and sets out clear processes, requirements, and the role of the Scientific Committee in each.

Definitions

Scientific Research

It is proposed that for the purpose of this CMM ‘scientific research’ be defined as vessel-based activities conducted with scientific research vessels or with properly staffed and equipped fishing vessels, where the only and/or the primary objective is to assess the state of one or more fishery resources or gain scientific knowledge on them by collecting samples, data and information, and not to have an immediate commercial gain or profit. This scientific research may or may not require that fishing for fishery resources for scientific purposes be conducted in the Convention area, based on which two basic types or categories of ‘scientific research’ may need to be identified: one not requiring to fish for fishery resources in the Convention area; and, the other one requiring to fish for fishery resources within the Convention area.

Commented [JC5]: It is our understanding that the Commission hasn’t taken any decision towards adding more species or taxonomic groups to the definition of ‘fishery resources’ in Article 1(f). Which, for the time being, clearly includes fish, molluscs and crustaceans. So, copepods and plankton in general are not to be considered as ‘fishery resources’ within this context.

In our interpretation of Art. 1(f), if phytoplankton and plankton in general are not specifically mentioned in the relevant sections of the Convention and no decision to include them as ‘fishery resources’ has been taken by the Commission, then this large taxonomic group is not to be considered as a fishery resource for the time being. Therefore, there might not be a need to include their specific case within the proposed CMM. Unless the Commission decides that, for instance, estimating the plankton abundance and/or its temporal or spatial distribution is to be interpreted as ‘fishing’ because it “can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources” (as per the definition in Art. 1(g)(ii)).

Commented [JC6]: This is one of the reasons we insist in using “scientific research” as oppose to just using “research” throughout the proposed draft CMM for scientific research. In fact, if we use “scientific research” and/or “fishing for scientific research purposes” the need to have an explicit definition of the term ‘fishery’ disappears.

Is not clear to us why ‘new or exploratory fisheries’ is to be included within this proposed CMM for scientific research. Article 22 of the Convention, CMM 13-2019 and the CMMs 14x-2019 abundantly deal with new and exploratory fisheries. And, in our view, any mention of ‘new or exploratory fisheries’ within the proposed CMM on scientific research just creates confusion or, at best, unneeded duplication.

Furthermore, for the 'scientific research requiring to fish within the Convention area' we may need to identify at least two sub-categories: one where all the fishing is made within previously agreed limits, which would include that all fishing be done solely/exclusively for scientific research purposes, with no portion of what is caught being used for commercial purposes, and/or that all fishing will be made within current SPRFMO area or catch limits, national allocations and in compliance with all relevant CMMs; and, the other one, where some exception for the catch and sale of any fishery resources in excess of any current SPRFMO area or catch limit, national allocation or other provisos in one or more current CMMs.

Therefore, the following categories and sub-categories of 'scientific research' in the SPRFMO Convention area are identified (alternative shorter naming suggested within brackets), for which different types of requirements may need to be considered:

- (A). **Scientific research not requiring to fish** for fishery resources in the Convention area (scientific research with no fishing) – all scientific research that doesn't require to remove or fish for living marine resources identified as fishery resources in terms of the SPRFMO Convention;
- (B). **Scientific research requiring to fish** for fishery resources in the Convention area (scientific research with fishing) – all scientific research requiring or expected to remove or fish for living marine resources identified as fishery resources in terms of the SPRFMO Convention. This group will need to be divided into two sub-categories on the basis of whether the expected fishing is to be conducted within already set provisos, arrangements, limits or constrains, or on whether special case-specific exceptions from existing provisos, arrangements, limits or constrains are needed or are needed or expected, as follows:
 - a) **Fishing for scientific research purposes within current provisos** (fishing within current provisos) – all fishing expected to be conducted in full compliance with previously agreed provisos, arrangements, limits or constrains, including those in this CMM as well as in other CMMs. Two further sub-categories are identified:
 - (i). **Scientific research fishing solely for scientific research purposes** (fishing solely for scientific purposes) – when all fishing is done or is expected to be done solely or exclusively for scientific research purposes, with no portion of what is caught or collected being retained, stored, processed or bartered for commercial purposes; and,
 - (ii). **Scientific research fishing for scientific purposes within catch allocation** (fishing within allocation) – when all fishing is done or is expected to be done for scientific research purposes and all or part of what will be caught will be used or is expected to be used for commercial purposes, and all the catch will be reported and accounted for against current SPRFMO area and catch limits and flag State national allocations and in compliance with all relevant CMMs.
 - b) **Fishing for scientific research purposes within case-specific exceptions** (fishing within case-specific exceptions) – when, while the primary objective is to assess the state of one or more fishery resources or gain scientific knowledge on them, all or part of the fishing to be conducted for scientific research purposes within the SPRFMO Convention area entails, or can reasonably be expected to entail, the catch and use for commercial purposes of any fishery resources in excess of any current SPRFMO catch or area limit or flag State national allocation and/or when some exception from any current CMM is or might be required.

Processes and Requirements

The following procedures and requirements are therefore applicable for each category or sub-category of 'scientific research' identified and described above:

- (A). **For scientific research not requiring to fish** for fishery resources in the Convention area – since this type of scientific research doesn't require or foresee the removal of, or the fishing fish for, living marine resources identified as fishery resources no particular procedure or communication requirement applies. However, as a matter of courtesy and in line with the spirit of international cooperation it may be requested that a report of any result of such research be provided voluntarily to the SPRFMO Secretariat for the information of the Scientific Committee;
- (B). **For scientific research requiring to fish** for scientific research purposes for fishery resources in the Convention area – depending on whether the expected fishing will be conducted within existing limits or CMM provisos and constraints, or on whether special case-specific exceptions are needed or expected, the following procedures and requirements are suggested:
 - a. **For scientific research fishing within current provisos** solely or exclusively for scientific research purposes; or, with all or part of what will be caught being used for commercial purposes and be reported and accounted for against current SPRFMO area and catch limits and flag State national allocations, and in compliance with all relevant CMMs. It is proposed that the following requirements be considered:
 - (i). that the vessel(s) involved be registered in the *Commission Record of Vessels Authorised to Fish in the SPRFMO Convention Area* at least 14 prior to their first entrance into the SPRFMO Convention area;
 - (ii). that the general scientific research survey plan be notified to the SPRFMO Secretariat at least 14 days prior to the commencement of such scientific research, or 14 days prior to the commencement of the first scientific research survey if such a scientific research is part of a planned long-term scientific research;
 - (iii). that the general scientific research survey plan to be notified to the SPRFMO Secretariat should include details on: the vessel(s) involved, the general objectives of the research, the area(s) to be surveyed, the maximum expected catch by survey (by species if these include target species for substantive SPRFMO fisheries), the expected total bottom contact area (footprint) if applicable, and the expected timeframe for each survey and for the overall planned scientific research if more than one survey is foreseen;
 - (iv). that Members and CNCPs be able to provide a multi-year notification of up to 5 years for scientific research involving annual surveys, and of up to 10+ years for scientific research involving annual surveys of areas under the national jurisdiction of a Member or CNCP coastal state that are expected to routinely or occasionally be extended into the adjacent areas within the SPRFMO Convention area; and,
 - (v). that a summary of the main observations and results of such scientific research be included in the report of activities in the SPRFMO Convention area that each Member and CNCP is committed to present each year to the Scientific Committee.
 - b. **For scientific research fishing within case-specific exceptions** (fishing within case-specific exceptions) – a more rigorous process will be put in place when the primary objective is to assess the state of one or more fishery resources or gain scientific knowledge on them and all or part of the fishing to be conducted for scientific research purposes within the SPRFMO Convention area entails, or can reasonably be expected to entail, the catch and use for commercial purposes of any fishery resources in excess of any current SPRFMO catch or area limit or flag State national allocation or when some exception from any

current CMM is or might be required. In these cases, it is proposed that the following process and requirements be considered:

- (i). that the vessel(s) involved be registered in the *Commission Record of Vessels Authorised to Fish in the SPRFMO Convention Area* at least 14 prior to their first entrance into the SPRFMO Convention area;
- (ii). that a detailed scientific research plan be submitted to the SPRFMO Secretariat well in advance (it is estimated that a minimum of 7 month counted from August of a given year is required) for the review, assessment and recommendation to the Commission by the SPRFMO Scientific Committee (meeting once a year, sometime in September or October) and the subsequent consideration and eventual approval by the SPRFMO Commission (meeting once a year, sometime in January or February);
- (iii). that the detailed scientific research plan to be submitted to the SPRFMO Secretariat should include details on: the vessel(s) involved, the general and specific objectives of the research, the area(s) to be surveyed, the expected vessel tracks and sampling stations, the maximum expected catch by survey (by species if these include target species for substantive SPRFMO fisheries), the location and expected bottom contact areas (footprint) and their totals if applicable, the expected timeframe for each survey and for the overall planned scientific research if more than one survey is foreseen;
- (iv). that, while the Members and CNCPs may be able to submit a multi-year plan for up to 3-5 years for scientific research involving annual surveys, their approval by the may be subject to an annual ratification by the Commission based on an updated review and recommendation from the Scientific Commission after consideration of the annual report and any further information provided. Additional flexibility may be agreed for scientific research involving annual surveys of areas under the national jurisdiction of a Member or CNCP coastal state that are expected to routinely or occasionally be extended into the adjacent areas within the SPRFMO Convention area; and,
- (v). that a detailed report of the scientific research conducted be provided to the SPRFMO Secretariat and a summary of the main observations and results of such scientific research be included in the report of activities in the SPRFMO Convention area that each Member and CNCP is committed to present each year to the Scientific Committee.

Scientific Research

It is proposed that scientific research should be notified to the SPRFMO Secretariat at least 14 days prior to the commencement of any research. The notification should include a copy of the survey plan, which should, at a minimum, include: details on the vessel(s) involved; the location of the research; the objectives of the research; the maximum expected catch (by species if these include target species for substantive SPRFMO fisheries); the expected total bottom contact area (footprint); and the expected timeframe for the research.

It is proposed that Members be able to provide a multi-year (up to 3-5 years) notification for scientific research, in particular, annual activities like towing continuous plankton recorders during transit through the Convention Area.

All scientific research activities should also be summarised in a Member's Annual Report to the Scientific Committee. This information will be summarised by the Secretariat annually to encourage and promote cooperation in research.

Commented [JC7]: This type of requirements for "scientific research" not requiring fishing; requiring fishing solely or exclusively for scientific research purposes, with no portion of what is caught or collected being retained, stored, processed or bartered for commercial purpose; or, requiring fishing within current SPRFMO catch limits and flag State national allocations, and in compliance with all relevant CMMs.

Commented [JC8]: Ok, but included elsewhere

All scientific research activities must comply with all relevant SPRFMO Conservation and Management Measures. If the planned research requires exemption from any SPRFMO Conservation and Management Measure it should be considered by the Scientific Committee, Compliance and Technical Committee, and Commission as per the procedures proposed for fishing for scientific purposes.

Commented [JC9]: This statement is redundant

Fishing for scientific purposes

It is proposed that, given the potential for catch limits to be exceeded or the requirement for exemptions to Conservation and Management Measures, a more rigorous process be put in place to ensure that fishing for scientific purposes does not threaten the long-term conservation and sustainable use of fishery resources or the marine ecosystems in which the resources occur.

It is proposed that fishing for scientific purposes should require recommendation by the SPRFMO Scientific Committee and approval by the Commission before commencing.

This would require the submission of a fishery research plan to the Scientific Committee for review at its annual meeting. The fishery research plan proposal would include, and Scientific Committee would assess against the following criteria:

- i. — Consistency of the research objective(s) with the objective of the SPRFMO Convention and the work plan of the Scientific Committee;
- ii. — Likelihood of the research to achieve its objective(s);
- iii. — Sustainability of proposed levels of catch; and
- iv. — Any expected impact on the wider marine ecosystem.

Where the Scientific Committee considers the research will contribute to the sustainable management of SPRFMO fishery resources, it will provide a recommendation to the Commission, and consider the research when providing advice on relevant catch limits.

Where the Scientific Committee considers a proposal is not consistent with the criteria or is unlikely to achieve the stated objectives, it can recommend to the Commission that the proposal not go ahead, or that no specific allowance be made within (or in addition to) any catch limit for the research, or that the proponents re-submit a revised proposal to the next Scientific Committee meeting.

This process is intended to give the Scientific Committee oversight on research activities that may impact on the sustainability of fisheries resources or the marine ecosystems in which these resources occur, to provide quality assurance on proposals, and also to ensure that there is a mechanism for the promotion of important research, including in areas with low catch limits.

If any exemptions are requested from SPRFMO Conservation and Management Measures, the plan should also be considered by the Compliance and Technical Committee before progressing to the Commission to ensure that there are no unacceptable technical or compliance risks that arise from the research proposal.

Working through some hypothetical examples:

Continuous Plankton Recorder

A commercial fishing vessel transiting the SPRFMO Convention Area will tow a continuous plankton recorder to collect information on productivity in the South Pacific Ocean.

Commented [JC10]: Please note observations and comments on the types of 'scientific research' and the applicable requirements to each case described above and in covering message.

The quantity of fishery resources (planktonic organisms) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

The flag state would be required to ensure the vessel is on the registered list of vessels, the Secretariat is notified at least two weeks (14 days) in advance of the first trip, and the flag state will report on the research in its Annual Report to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work given the quantity of fishery resource expected to be taken is low and of negligible commercial value.

Benthic biodiversity survey

A research or fishing vessel is intending to carry out a survey of benthic biodiversity in the SPRFMO Convention Area. The survey will include the use of epibenthic sled sampling, Deep Towed Imaging System (DTIS) camera transects, and grab sampling over a wide area of the Convention Area.

The quantity of fishery resources (sedentary benthic species) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

However, as benthic species are considered a fishery-resource, and the use of an epibenthic sled or grab sampling could be described a gear likely to come in contact with the seafloor or benthic organisms, this research would be required to comply with CMM-03-2019.

As such, the research would only be able to be undertaken within the Management Areas currently defined in CMM-03-2019 unless an exemption were requested, in which case the research would need to be considered by the Scientific Committee, Compliance and Technical Committee, and Commission.

Therefore, this would be considered 'fishing for scientific purposes', and a fishing research plan would need to be submitted to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work, however any activities of the vessel that may occur on the same trip (e.g. commercial fishing during the same voyage) would be considered by the SC, CTC, and Commission during consideration of the research plan.

Acoustic survey

A research vessel is intending to carry out an acoustic survey for jack mackerel within the Convention Area.

As acoustic surveying requires only minimal sampling of fishing to allow for interpretation of the acoustic data, this survey would be expected not to take commercial quantities of any fishery resource and would therefore be considered 'scientific research'.

Alternately, if the survey required the taking of commercial quantities of catch but all catch was accounted for within a Members' allocation and activities were entirely consistent with existing CMMs, this would also be considered 'scientific research'.

A commercial fishing vessel is intending to carry out an acoustic survey for orange roughy entirely within Management Areas, and accounting for all catch within a Member state allocation.

This would be considered scientific research, as all catch is accounted for and the work will be carried out entirely within the scope of current SPRFMO CMMs.

Commented [JC11]: There will be a need to define what is or how much is a "commercial quantity". This could vary widely according to the species caught.

A commercial fishing vessel has been commissioned to carry out an acoustic survey for orange roughy entirely within Management Areas, but in an area where the catch limit is too low for the Member to account for catch within its national allocation.

The quantity of catch required to be taken for an orange roughy acoustic survey is not necessarily a commercial quantity. However, sampling for a survey is required to be done on the aggregation that has been surveyed. Towing on dense aggregations of orange roughy results in variable levels of catch, and it can be difficult to limit the quantity of fish taken. In addition, the vessel may fish in other areas (where more allocation is available) which would result in a commercial quantity of catch to be taken.

This research would therefore be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

Comment: This scenario is somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Depletion experiment

A commercial vessel is proposing a depletion experiment whereby they plan to estimate the biomass of one or more fish species associated with underwater topographical features within existing bottom line fishing areas

Because a depletion experiment requires sufficient catch to be taken to suppress catch rates substantially within an area, the quantity of catch required is likely to be relatively large compared with current low catch limits for bottom fishing species other than orange roughy. Thus, the catch is very likely to be sold, and it is possible that catch in excess of a Member's allocation may be required.

If the depletion experiment was conducted using bottom line fishing methods, this experiment would be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

If the depletion experiment was conducted using an entirely different method (such as potting or trapping), this experiment would be considered a new or exploratory fishery, and the proponents would be required to follow the procedures specified in CMM-13-2019.

Comment: Both scenarios are somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Tagging studies

A Member state is proposing that its commercial fishing vessels will carry out tagging studies on jack mackerel, releasing live tagged fish after their capture.

Assuming that there is not currently any 'landings obligation' in SPRFMO, the return of tagged fish to the sea would not be inconsistent with any SPRFMO CMMs. However, it may require clarification in regards to the reporting requirements (CMM02-2018).

Given that this research would not be expected to result in any take of fishery resources outside of Member allocations, and would not require any exemptions from CMMs, this would be considered 'scientific research'.

Trawl survey

A Member state is proposing that a research vessel carry out a trawl survey focused on estimating abundance of squid in the SPRFMO Convention Area.

Provided that the Member state is intending to report all catch of squid and other associated species in a manner consistent with the data standard (CMM-02-2018), and comply with all other relevant CMMs, this would be considered scientific research and require only notification to the Secretariat and reporting in the Member's Annual Report.

Comments from Australia:

Managing research in the SPRFMO Convention Area

Proposal and rationale for Intersessional Discussion

Tiffany Bock, Martin Cryer
New Zealand

Contents

Purpose	3
SPRFMO Convention	3
Relevant SPRFMO Convention definitions.....	3
Issue Summary	4
Proposal	4
Definitions.....	4
Scientific Research	4
Fishing for scientific purposes.....	15
Scientific Research	6
Fishing for scientific purposes.....	8
Working through some hypothetical examples:.....	8
Continuous Plankton Recorder	8
Benthic biodiversity survey.....	9
Acoustic survey	9
Depletion experiment	10
Tagging studies.....	10
Trawl survey.....	11

Purpose

This paper is intended to provide context and information to the intersessional working group regarding the rationale and key considerations in the development of a Conservation and Management Measure (CMM) to promote scientific research in the SPRFMO Convention Area.

SPRFMO Convention

The objective (Article 2) of the SPRFMO Convention is, through the application of the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources occur.

Article 8 of the SPRFMO Convention identifies one of the functions of the Commission as being to:

d) “promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and of the same fishery resources in adjacent waters under national jurisdiction, and, in collaboration with the Scientific Committee, establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.”

This identifies two functions for the Commission:

- 1) to promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and adjacent waters under national jurisdiction; and
- 2) in collaboration with the Scientific Committee, to establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area

Based on the objective of the Convention and the text above, we propose that the focus of the Conservation and Management Measure for the promotion of scientific research in the SPRFMO Convention Area be on defining and setting clear and simple notification procedures for the conduct of scientific research, and defining and establishing procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Relevant SPRFMO Convention definitions

Fishing is defined as:

- V. The actual or attempted searching for, catching, taking or harvesting of fishery resources;
- VI. Engaging in any activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources for any purpose;
- VII. Transshipment and any operation at sea in support of, or in preparation for, any activity described in this definition; and
- VIII. The use of any vessel, vehicle, aircraft or hovercraft, in relation to any activity described in this definition.

Fishery resources are defined as:

All fish within the Convention Area, including: molluscs; crustaceans; and other living marine resources as may be decided by the Commission; but excluding:

- V. sedentary species in so far as they are subject to the national jurisdiction of coastal States pursuant to Article 77 paragraph 4 of the 1982 Convention;
- VI. highly migratory species listed in Annex I of the 1982 Convention;

Commented [LG12]: The proposal in this discussion paper appears to be broader than promoting scientific research – as noted below it appears the objective of a CMM will be to establish a mechanism for ‘fishing for fishery resources for scientific purposes’

Commented [LG13]: An interpretation of this might be that the data standards CMM and other CMMs already establish these procedures

Commented [LG14]: I’m still not convinced this justifies the need for a research CMM

Commented [LG15]: Fishing for fishery resources for scientific purposes and scientific research could be two very different things

Commented [LG16]: The commission hasn’t decided that copepods/plankton etc be defined as fishery resources

- VII. anadromous and catadromous species and
- VIII. marine mammals, marine reptiles and sea birds.

Based on these definitions, any activity that can be reasonably expected to catch marine resources (e.g. copepods, plankton, sponges, squid, anchovy) is defined as fishing.

Fishing vessel is defined as:

Any vessel used or intended for fishing, including fish processing vessels, support ships, carrier vessels and any other vessel directly engaged in fishing operations.

New or Exploratory Fisheries (Article 22)

“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...”

Note that there is no explicit definition of the term ‘fishery’, which does not allow for easy differentiation between research and new / exploratory fisheries.

Issue Summary

In our view, a Conservation and Management Measure to promote the conduct of scientific research is required to:

- differentiate between scientific research, fishing for scientific purposes, and new / exploratory fisheries; and
- ensure cooperation in scientific research is encouraged and promoted; and
- establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Proposal

We propose a Conservation and Management Measure that defines ‘scientific research’ and ‘fishing for fishery resources for scientific purposes’, and sets out clear processes, requirements, and the role of the Scientific Committee in each.

Definitions

Scientific Research

It is proposed that ‘scientific research’ be defined as vessel-based activities collecting data and information that EITHER:

- i) do not entail the sale of any fisheries resources taken (during a voyage?); OR
- ii) are carried out entirely within any current SPRFMO catch limits, national allocations, and in compliance with all relevant Conservation and Management Measures

Fishing for scientific purposes

It is proposed that fishing for scientific purposes be defined as vessel-based activities in a current Management Area or within an existing fishery that EITHER:

- i) requires exemption from any SPRFMO Conservation and Management Measure; OR
- ii) entails, or can reasonably be expected to entail, the catch and sale of any fishery resources in excess of any current SPRFMO catch limit or national allocation.

Commented [K.R17]: There is a difference between something that *can be* defined as a fishery resource and something that *is* defined as a fishery resource where any non-fish organism would require a positive decision of the commission to determine it as such.

Commented [LG18]: Does this cover collection of observer data or any other data that may be used for scientific purposes?

Commented [K.R19]: What about otolith collection, for example?

Commented [K.R20]: Commercial sale might not be a useful proxy for defining whether something can be defined as scientific research or not

Commented [LG21]: SPRFMO allocations? What about situations with straddling stocks?

Commented [K.R22]: Why would (ii) need to be separately regulated under a research measure??? If it is carried out under existing measure what makes it scientific research necessarily?

Commented [K.R23]: Agree that there may be merit in developing processes for scientific research to take place in existing fisheries which would entail the catch and sale of fishery resources in excess of current SPRFMO catch limits etc. However, definition reads more like a threshold that might trigger one procedure over another.

Process and Requirements

Scientific Research

It is proposed that scientific research should be notified to the SPRFMO Secretariat at least 14 days prior to the commencement of any research. The notification should include a copy of the survey plan, which should, at a minimum, include: details on the vessel(s) involved; the location of the research; the objectives of the research; the maximum expected catch (by species if these include target species for substantive SPRFMO fisheries); the expected total bottom contact area (footprint); and the expected timeframe for the research.

It is proposed that Members be able to provide a multi-year (up to 3-5 years) notification for scientific research, in particular, annual activities like towing continuous plankton recorders during transit through the Convention Area.

All scientific research activities should also be summarised in a Member's Annual Report to the Scientific Committee. This information will be summarised by the Secretariat annually to encourage and promote cooperation in research.

All scientific research activities must comply with all relevant SPRFMO Conservation and Management Measures. If the planned research requires exemption from any SPRFMO Conservation and Management Measure it should be considered by the Scientific Committee, Compliance and Technical Committee, and Commission as per the procedures proposed for fishing for scientific purposes.

Fishing for scientific purposes

It is proposed that, given the potential for catch limits to be exceeded or the requirement for exemptions to Conservation and Management Measures, a more rigorous process be put in place to ensure that fishing for scientific purposes does not threaten the long-term conservation and sustainable use of fishery resources or the marine ecosystems in which the resources occur.

It is proposed that fishing for scientific purposes should require recommendation by the SPRFMO Scientific Committee and approval by the Commission before commencing.

This would require the submission of a fishery research plan to the Scientific Committee for review at its annual meeting. The fishery research plan proposal would include, and Scientific Committee would assess against the following criteria:

- v. Consistency of the research objective(s) with the objective of the SPRFMO Convention and the work plan of the Scientific Committee;
- vi. Likelihood of the research to achieve its objective(s);
- vii. Sustainability of proposed levels of catch; and
- viii. Any expected impact on the wider marine ecosystem.

Where the Scientific Committee considers the research will contribute to the sustainable management of SPRFMO fishery resources, it will provide a recommendation to the Commission, and consider the research when providing advice on relevant catch limits.

Where the Scientific Committee considers a proposal is not consistent with the criteria or is unlikely to achieve the stated objectives, it can recommend to the Commission that the proposal not go ahead, or that no specific allowance be made within (or in addition to) any catch limit for the research, or that the proponents re-submit a revised proposal to the next Scientific Committee meeting.

Commented [K.R24]: What purpose is this serving? Is this really an improvement on notifying any research undertaken in the national reports to SC?

Commented [K.R25]: This could be interpreted as needing to provide a plan for everything relevant to 'science', all of the time.

Commented [LG26]: What if it isn't a survey? If observer data collection (for example) is included, then we would need to notify the scientific data collection objectives for each and every trip (or every 3-5 years as noted below). What would such a plan look like? Wouldn't it duplicate requirements of the existing CMMs eg. wrt data collection and reporting? Should this CMM be seeking to provide a guideline for such a plan (akin to the BFIAS for BFIA?)

Commented [LG27]: Is basic data collection the same as scientific research?

Commented [LG28]: This is rather subjective in this context

This process is intended to give the Scientific Committee oversight on research activities that may impact on the sustainability of fisheries resources or the marine ecosystems in which these resources occur, to provide quality assurance on proposals, and also to ensure that there is a mechanism for the promotion of important research, including in areas with low catch limits.

If any exemptions are requested from SPRFMO Conservation and Management Measures, the plan should also be considered by the Compliance and Technical Committee before progressing to the Commission to ensure that there are no unacceptable technical or compliance risks that arise from the research proposal.

Working through some hypothetical examples:

Continuous Plankton Recorder

A commercial fishing vessel transiting the SPRFMO Convention Area will tow a continuous plankton recorder to collect information on productivity in the South Pacific Ocean.

The quantity of fishery resources (planktonic organisms) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

The flag state would be required to ensure the vessel is on the registered list of vessels, the Secretariat is notified at least two weeks (14 days) in advance of the first trip, and the flag state will report on the research in its Annual Report to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work given the quantity of fishery resource expected to be taken is low and of negligible commercial value.

Benthic biodiversity survey

A research or fishing vessel is intending to carry out a survey of benthic biodiversity in the SPRFMO Convention Area. The survey will include the use of epibenthic sled sampling, Deep Towed Imaging System (DTIS) camera transects, and grab sampling over a wide area of the Convention Area.

The quantity of fishery resources (sedentary benthic species) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

However, as benthic species are considered a fishery-resource, and the use of an epibenthic sled or grab sampling could be described a gear likely to come in contact with the seafloor or benthic organisms, this research would be required to comply with CMM-03-2019.

As such, the research would only be able to be undertaken within the Management Areas currently defined in CMM-03-2019 unless an exemption were requested, in which case the research would need to be considered by the Scientific Committee, Compliance and Technical Committee, and Commission.

Therefore, this would be considered 'fishing for scientific purposes', and a fishing research plan would need to be submitted to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work, however any activities of the vessel that may occur on the same trip (e.g. commercial fishing during the same voyage) would be considered by the SC, CTC, and Commission during consideration of the research plan.

Commented [LG29]: Not sure this is useful as the commission hasn't decided that plankton are fishery resources

Commented [LG30]: Unless it's black coral...

Commented [LG31]: A big problem with this is that Australia don't necessarily have the frameworks in place to understand when research organisations might go out and do research that isn't necessarily related to fishing (or isn't defined as fishing).

Acoustic survey

A research vessel is intending to carry out an acoustic survey for jack mackerel within the Convention Area.

As acoustic surveying requires only minimal sampling of fishing to allow for interpretation of the acoustic data, this survey would be expected not to take commercial quantities of any fishery resource and would therefore be considered 'scientific research'.

Alternately, if the survey required the taking of commercial quantities of catch but all catch was accounted for within a Member's SPRFMO allocation and activities were consistent with existing CMMs, this would also be considered 'scientific research'.

A commercial fishing vessel is intending to carry out an acoustic survey for orange roughy entirely within Management Areas, and accounting for all catch within a Member state allocation.

This would be considered scientific research, as all catch is accounted for and the work will be carried out entirely within the scope of current SPRFMO CMMs.

A commercial fishing vessel has been commissioned to carry out an acoustic survey for orange roughy entirely within Management Areas, but in an area where the catch limit is too low for the Member to account for catch within its national allocation.

The quantity of catch required to be taken for an orange roughy acoustic survey is not necessarily a commercial quantity. However, sampling for a survey is required to be done on the aggregation that has been surveyed. Towing on dense aggregations of orange roughy results in variable levels of catch, and it can be difficult to limit the quantity of fish taken. In addition, the vessel may fish in other areas (where more allocation is available) which would result in a commercial quantity of catch to be taken.

This research would therefore be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

Comment: This scenario is somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Depletion experiment

A commercial vessel is proposing a depletion experiment whereby they plan to estimate the biomass of one or more fish species associated with underwater topographical features within existing bottom line fishing areas

Because a depletion experiment requires sufficient catch to be taken to suppress catch rates substantially within an area, the quantity of catch required is likely to be relatively large compared with current low catch limits for bottom fishing species other than orange roughy. Thus, the catch is very likely to be sold, and it is possible that catch in excess of a Member's allocation may be required.

If the depletion experiment was conducted using bottom line fishing methods, this experiment would be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

Commented [LG32]: What about for straddling stocks? How would this be accounted for against a Member's allocation?

Commented [LG33]: It might not be (e.g. acoustic/trawl surveys on STR and even Tasman sea features), and also has interesting implications for what to do in situations where one member may take their allocation + the amount allowed for under a 'fishing for scientific purposes' approval by SC and the Commission, such that the total allowable catch may be fully taken or exceeded. What would be the implications for any other members with allocations?

If the depletion experiment was conducted using an entirely different method (such as potting or trapping), this experiment would be considered a new or exploratory fishery, and the proponents would be required to follow the procedures specified in CMM-13-2019.

Comment: Both scenarios are somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Tagging studies

A Member state is proposing that its commercial fishing vessels will carry out tagging studies on jack mackerel, releasing live tagged fish after their capture.

Assuming that there is not currently any 'landings obligation' in SPRFMO, the return of tagged fish to the sea would not be inconsistent with any SPRFMO CMMs. However, it may require clarification in regards to the reporting requirements (CMM02-2018).

Given that this research would not be expected to result in any take of fishery resources outside of Member allocations, and would not require any exemptions from CMMs, this would be considered 'scientific research'.

Trawl survey

A Member state is proposing that a research vessel carry out a trawl survey focused on estimating abundance of squid in the SPRFMO Convention Area.

Provided that the Member state is intending to report all catch of squid and other associated species in a manner consistent with the data standard (CMM-02-2018), and comply with all other relevant CMMs, this would be considered scientific research and require only notification to the Secretariat and reporting in the Member's Annual Report.

Comments from EU:

Managing research in the SPRFMO Convention Area

Proposal and rationale for Intersessional Discussion

Tiffany Bock, Martin Cryer
New Zealand

Contents

Purpose	3
SPRFMO Convention	3
Relevant SPRFMO Convention definitions	3
Issue Summary	4
Proposal	4
Definitions	4
Scientific Research	4
Fishing for scientific purposes	15
Scientific Research	6
Fishing for scientific purposes	8
Working through some hypothetical examples:	8
Continuous Plankton Recorder	8
Benthic biodiversity survey	9
Acoustic survey	9
Depletion experiment	10
Tagging studies	10
Trawl survey	11

Purpose

The aim of this paper is to provide the rationale for and explain the key concepts relating to the development of a Conservation and Management Measure (CMM) to promote scientific research in the SPRFMO Convention Area. ~~context and information~~.

SPRFMO Convention and the role of the Commission

The objective of the SPRFMO Convention as expressed in Article 2 is to ensure the long-term conservation and sustainable use of fishery resources through the application of the precautionary approach and an ecosystem approach to fisheries management, and, in so doing, to safeguard the marine ecosystems in which these resources occur.

#add linking sentence#

Article 8 (d) of the SPRFMO Convention identifies one of the responsibilities of the Commission to:

“promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and of the same fishery resources in adjacent waters under national jurisdiction, and, in collaboration with the Scientific Committee, establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.”

This identifies two functions for the Commission:

- 1) to promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and adjacent waters under national jurisdiction; and
- 2) in collaboration with the Scientific Committee, to establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area

#add linking sentence#

We therefore propose that the focus of the Conservation and Management Measure for the promotion of scientific research in the SPRFMO Convention Area should be on defining and setting clear and simple notification procedures for the conduct of scientific research, and defining and establishing procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Issue Summary

In our view, a Conservation and Management Measure to promote the conduct of scientific research is required to:

- differentiate between scientific research, fishing for scientific purposes, and new / exploratory fisheries; and
- ensure cooperation in scientific research is encouraged and promoted; and
- establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Current relevant SPRFMO Convention definitions

#add introductory section sentence/paragraph here#

Fishing is defined as:

Commented [A34]: Fisheries-related, or any type of scientific research?

Commented [A35]: How are these two different?

Commented [A36]: Suggest changing this header to “Introduction”

Commented [A37]: From the text it’s not quite clear how we get from “precautionary approach” to “conduct scientific research”. The link is obviously there, but it would be helpful for the reader if these two dots could be connected with a bridging path.

Commented [A38]: My personal preference is to only use direct quotations when it’s central to the argument/text development. Could this be summarised and still retain the same impact? Not an issue if not.

Commented [A39]: Repeated from above – do we need both? See also previous comment

Commented [A40]: Here, another short sentence would be helpful that links the functions of the commission to this document submitted to SC – are there discussions that can be referred to, or is this the SC contribution to a future discussion at Com, or how is this document linked to the actions outlined above?

Commented [A41]: This is the key phrase – is the CMM for all and any scientific research, or for sci res as given in this phrase? If the latter, then the concept should be introduced at the very start of the document.

Commented [A42]: It would be helpful for the reader to understand straight away what this next section will do, just to be in the right frame. A sentence or short paragraph setting the scene would help here. Following for the “issues” section, my impression is that maybe the current definitions are not sufficient or not comprehensive enough? If that is the case, that’s something that be said here.

Commented [A43]: Throughout this section, could we provide the CMM/document reference to where these terms are defined?

- IX. The actual or attempted searching for, catching, taking or harvesting of fishery resources;
- X. Engaging in any activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources for any purpose;
- XI. Transshipment and any operation at sea in support of, or in preparation for, any activity described in this definition; and
- XII. The use of any vessel, vehicle, aircraft or hovercraft, in relation to any activity described in this definition.

Fishery resources are defined as:

All fish within the Convention Area, including molluscs, crustaceans, and other living marine resources as may be decided by the Commission, but excluding:

- IX. sedentary species in so far as they are subject to the national jurisdiction of coastal States pursuant to Article 77 paragraph 4 of the 1982 Convention;
- X. highly migratory species listed in Annex I of the 1982 Convention;
- XI. anadromous and catadromous species, and
- XII. marine mammals, marine reptiles and sea birds.

Based on these definitions, any activity that can be reasonably expected to catch marine resources (e.g. copepods, plankton, sponges, squid, anchovy) counts as fishing.

Fishing vessel is defined as:

Any vessel used or intended for fishing, including fish processing vessels, support ships, carrier vessels and any other vessel directly engaged in fishing operations.

New or Exploratory Fisheries (Article 22) are defined as:

“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...”

Note that there is no explicit definition of the term ‘fishery’, which does not allow for easy differentiation between research and new / exploratory fisheries.

Commented [A44]: This is a key concept – could this be brought out more, e.g. in the introductory sentence above? At present this section reads like a list of definitions, but then these important items suddenly pop up and may be missed/ not receive the attention they need to follow the central argument of the paper.

Commented [A45]: As above

Proposal

We propose a Conservation and Management Measure that defines ‘scientific research’ and ‘fishing for fishery resources for scientific purposes’, and sets out clear processes, requirements, and the role of the Scientific Committee in each.

New Definitions

Scientific Research

We propose that ‘scientific research’ be defined as vessel-based activities collecting data and information that EITHER:

- iii) do not entail the sale of any fisheries resources taken (during a voyage?); OR
- iv) are carried out entirely within any current SPRFMO catch limits, national allocations, and in compliance with all relevant Conservation and Management Measures

Fishing for scientific purposes

We propose that fishing for scientific purposes be defined as vessel-based activities in a current Management Area or within an existing fishery that EITHER:

- iii) requires exemption from any SPRFMO Conservation and Management Measure; OR
- iv) entails, or can reasonably be expected to entail, the catch and sale of any fishery resources in excess of any current SPRFMO catch limit or national allocation.

Process and Requirements

Scientific Research

We propose that scientific research should be notified to the SPRFMO Secretariat at least 14 days prior to the commencement of any such activities. The notification should include a copy of the survey plan, which should, at a minimum, include: details on the vessel(s) involved; the location of the research; the objectives of the research; the maximum expected catch (by species if these include target species for substantive SPRFMO fisheries); the expected total bottom contact area (footprint); and the expected timeframe for the research.

It is proposed that Members be able to provide a multi-year (up to 3-5 years) notification for scientific research, in particular, annual activities like towing continuous plankton recorders during transit through the Convention Area.

All scientific research activities should also be summarised in a Member's Annual Report to the Scientific Committee. This information will be summarised by the Secretariat annually to encourage and promote cooperation in research.

All scientific research activities must comply with all relevant SPRFMO Conservation and Management Measures. If the planned research requires exemption from any SPRFMO Conservation and Management Measure it should be considered by the Scientific Committee, Compliance and Technical Committee, and Commission as per the procedures proposed for fishing for scientific purposes.

Fishing for scientific purposes

It is proposed that, given the potential for catch limits to be exceeded or the requirement for exemptions to Conservation and Management Measures, a more rigorous process be put in place to ensure that fishing for scientific purposes does not threaten the long-term conservation and sustainable use of fishery resources or the marine ecosystems in which the resources occur.

It is proposed that fishing for scientific purposes should require recommendation by the SPRFMO Scientific Committee and approval by the Commission before commencing.

This would require the submission of a fishery research plan to the Scientific Committee for review at its annual meeting. The fishery research plan proposal would include, and Scientific Committee would assess against the following criteria:

- ix. Consistency of the research objective(s) with the objective of the SPRFMO Convention and the work plan of the Scientific Committee;
- x. Likelihood of the research to achieve its objective(s);
- xi. Sustainability of proposed levels of catch; and
- xii. Any expected impact on the wider marine ecosystem.

Commented [A46]: The main question here is whether SPRFMO has the authority to request these notifications in all circumstances.

If not, it may be good to indicate that SPRFMO would 'encourage to be notified'.

Also, how is SPRFMO going to control this? Would this lead to difficult compliance issues? That is probably an area we'd like to stay away from.

Commented [A47]: Should the SC develop a template?

Commented [A48]: + expected cumulative impacts

Where the Scientific Committee considers the research will contribute to the sustainable management of SPRFMO fishery resources, it will provide a recommendation to the Commission, and consider the research when providing advice on relevant catch limits.

Where the Scientific Committee concludes that a proposal is not consistent with these criteria or is unlikely to achieve the stated objectives, it can recommend to the Commission that the proposal does not go ahead, or that no specific allowance be made within (or in addition to) any catch limit for the research, or that the proponents re-submit a revised proposal to the next Scientific Committee meeting.

This process is intended to give the Scientific Committee oversight on research activities that may impact on the sustainability of fisheries resources or the marine ecosystems in which these resources occur, to provide quality assurance on proposals, and also to ensure that there is a mechanism for the promotion of important research, including in areas with low catch limits.

If any exemptions are requested from SPRFMO Conservation and Management Measures, the plan should also be considered by the Compliance and Technical Committee before progressing to the Commission to ensure that there are no unacceptable technical or compliance risks that arise from the research proposal.

Commented [A49]: Would probably need a distinction here if we're referring to any research (e.g. plankton recorders) or those specifically extracting fisheries resources. It may be difficult to forbid research by an independent body in SPRFMO CA if it falls under the definition of scientific research above. This is in the section for "fishing for sci purposes", however I think it would be helpful to have defined terms for each type and then be consistent throughout the text, minimising opportunity for misunderstanding.

Working through some hypothetical examples:

Continuous Plankton Recorder

A commercial fishing vessel transiting the SPRFMO Convention Area will tow a continuous plankton recorder to collect information on productivity in the South Pacific Ocean.

The quantity of fishery resources (planktonic organisms) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

The flag state would be required to ensure the vessel is on the registered list of vessels, the Secretariat is notified at least two weeks (14 days) in advance of the first trip, and the flag state will report on the research in its Annual Report to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work given the quantity of fishery resource expected to be taken is low and of negligible commercial value.

Benthic biodiversity survey

A research or fishing vessel is intending to carry out a survey of benthic biodiversity in the SPRFMO Convention Area. The survey will include the use of epibenthic sled sampling, Deep Towed Imaging System (DTIS) camera transects, and grab sampling over a wide area of the Convention Area.

The quantity of fishery resources (sedentary benthic species) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

However, as benthic species are considered a fishery-resource, and the use of an epibenthic sled or grab sampling could be described a gear likely to come in contact with the seafloor or benthic organisms, this research would be required to comply with CMM-03-2019.

As such, the research would only be able to be undertaken within the Management Areas currently defined in CMM-03-2019 unless an exemption were requested, in which case the research would

need to be considered by the Scientific Committee, Compliance and Technical Committee, and Commission.

Therefore, this would be considered 'fishing for scientific purposes', and a fishing research plan would need to be submitted to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work, however any activities of the vessel that may occur on the same trip (e.g. commercial fishing during the same voyage) would be considered by the SC, CTC, and Commission during consideration of the research plan.

Acoustic survey

A research vessel is intending to carry out an acoustic survey for jack mackerel within the Convention Area.

As acoustic surveying requires only minimal sampling of fishing to allow for interpretation of the acoustic data, this survey would be expected not to take commercial quantities of any fishery resource and would therefore be considered 'scientific research'.

Alternately, if the survey required the taking of commercial quantities of catch but all catch was accounted for within a Members' allocation and activities were entirely consistent with existing CMMs, this would also be considered 'scientific research'.

A commercial fishing vessel is intending to carry out an acoustic survey for orange roughy entirely within Management Areas, and accounting for all catch within a Member state allocation.

This would be considered scientific research, as all catch is accounted for and the work will be carried out entirely within the scope of current SPRFMO CMMs.

A commercial fishing vessel has been commissioned to carry out an acoustic survey for orange roughy entirely within Management Areas, but in an area where the catch limit is too low for the Member to account for catch within its national allocation.

The quantity of catch required to be taken for an orange roughy acoustic survey is not necessarily a commercial quantity. However, sampling for a survey is required to be done on the aggregation that has been surveyed. Towing on dense aggregations of orange roughy results in variable levels of catch, and it can be difficult to limit the quantity of fish taken. In addition, the vessel may fish in other areas (where more allocation is available) which would result in a commercial quantity of catch to be taken.

This research would therefore be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

Comment: This scenario is somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Depletion experiment

A commercial vessel is proposing a depletion experiment whereby they plan to estimate the biomass of one or more fish species associated with underwater topographical features within existing bottom line fishing areas

Because a depletion experiment requires sufficient catch to be taken to suppress catch rates substantially within an area, the quantity of catch required is likely to be relatively large compared with current low catch limits for bottom fishing species other than orange roughy. Thus, the catch is very likely to be sold, and it is possible that catch in excess of a Member's allocation may be required.

If the depletion experiment was conducted using bottom line fishing methods, this experiment would be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

If the depletion experiment was conducted using an entirely different method (such as potting or trapping), this experiment would be considered a new or exploratory fishery, and the proponents would be required to follow the procedures specified in CMM-13-2019.

Comment: Both scenarios are somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Tagging studies

A Member state is proposing that its commercial fishing vessels will carry out tagging studies on jack mackerel, releasing live tagged fish after their capture.

Assuming that there is not currently any 'landings obligation' in SPRFMO, the return of tagged fish to the sea would not be inconsistent with any SPRFMO CMMs. However, it may require clarification in regards to the reporting requirements (CMM02-2018).

Given that this research would not be expected to result in any take of fishery resources outside of Member allocations, and would not require any exemptions from CMMs, this would be considered 'scientific research'.

Trawl survey

A Member state is proposing that a research vessel carry out a trawl survey focused on estimating abundance of squid in the SPRFMO Convention Area.

Provided that the Member state is intending to report all catch of squid and other associated species in a manner consistent with the data standard (CMM-02-2018), and comply with all other relevant CMMs, this would be considered scientific research and require only notification to the Secretariat and reporting in the Member's Annual Report.

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Purpose	3
SPRFMO Convention	3
Relevant SPRFMO Convention definitions	3
Issue Summary	4
Proposal	4
Definitions	4
Scientific Research	4
Fishing for scientific purposes	4
Scientific Research	5
Fishing for scientific purposes	5
Working through some hypothetical examples:	7
Continuous Plankton Recorder	7
Benthic biodiversity survey	7
Acoustic survey	7
Depletion experiment	8
Tagging studies	8
Trawl survey	9

Purpose

This paper is intended to provide context and information to the intersessional working group regarding the rationale and key considerations in the development of a Conservation and Management Measure (CMM) to promote scientific research in the SPRFMO Convention Area.

SPRFMO Convention

The objective (Article 2) of the SPRFMO Convention is, through the application of the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources occur.

Article 8 of the SPRFMO Convention identifies one of the functions of the Commission as being to:

d) “promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and of the same fishery resources in adjacent waters under national jurisdiction, and, in collaboration with the Scientific Committee, establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.”

This identifies two functions for the Commission:

- 1) to promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and adjacent waters under national jurisdiction; and
- 2) in collaboration with the Scientific Committee, to establish procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area

Based on the objective of the Convention and the text above, we propose that the focus of the Conservation and Management Measure for the promotion of scientific research in the SPRFMO Convention Area be on defining and setting clear and simple notification procedures for the conduct of scientific research, and defining and establishing procedures for the conduct of fishing for fishery resources for scientific purposes in the Convention Area.

Relevant SPRFMO Convention definitions

Fishing is defined as:

- I. The actual or attempted searching for, catching, taking or harvesting of fishery resources;
- II. Engaging in any activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fishery resources for any purpose;
- III. Transshipment and any operation at sea in support of, or in preparation for, any activity described in this definition; and
- IV. The use of any vessel, vehicle, aircraft or hovercraft, in relation to any activity described in this definition.

Fishery resources are defined as:

All fish within the Convention Area, including: molluscs; crustaceans; and other living marine resources as may be decided by the Commission; but excluding:

- I. sedentary species in so far as they are subject to the national jurisdiction of coastal States pursuant to Article 77 paragraph 4 of the 1982 Convention;

- II. highly migratory species listed in Annex I of the 1982 Convention;
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Based on these definitions, any activity that can be reasonably expected to catch marine resources (e.g. copepods, plankton, sponges, squid, anchovy) counts as fishing.

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“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...”

Note that there is no explicit definition of the term ‘fishery’, which does not allow for easy differentiation between research and new / exploratory fisheries.

Issue Summary

In our view, a Conservation and Management Measure to promote the conduct of scientific research is required to:

- differentiate between scientific research, fishing for scientific purposes, and new / exploratory fisheries; and
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Proposal

We propose a Conservation and Management Measure that defines ‘scientific research’ and ‘fishing for fishery resources for scientific purposes’, and sets out clear processes, requirements, and the role of the Scientific Committee in each.

Definitions

Scientific Research

It is proposed that ‘scientific research’ be defined as vessel-based activities collecting data and information that EITHER:

- i) do not entail the sale of any fisheries resources taken (during a voyage?); OR
- ii) are carried out entirely within any current SPRFMO catch limits, national allocations, and in compliance with all relevant Conservation and Management Measures

Fishing for scientific purposes

It is proposed that fishing for scientific purposes be defined as vessel-based activities in a current Management Area or within an existing fishery that EITHER:

- i) requires exemption from any SPRFMO Conservation and Management Measure; OR
- ii) entails, or can reasonably be expected to entail, the catch and sale of any fishery resources in excess of any current SPRFMO catch limit or national allocation.

Process and Requirements

Scientific Research

It is proposed that scientific research should be notified to the SPRFMO Secretariat at least 14 days prior to the commencement of any research. The notification should include a copy of the survey plan, which should, at a minimum, include: details on the vessel(s) involved; the location of the research; the objectives of the research; the maximum expected catch (by species if these include target species for substantive SPRFMO fisheries); the expected total bottom contact area (footprint); and the expected timeframe for the research.

It is proposed that Members be able to provide a multi-year (up to 3-5 years) notification for scientific research, in particular, annual activities like towing continuous plankton recorders during transit through the Convention Area.

All scientific research activities should also be summarised in a Member's Annual Report to the Scientific Committee. This information will be summarised by the Secretariat annually to encourage and promote cooperation in research.


All scientific research activities must comply with all relevant SPRFMO Conservation and Management Measures. If the planned research requires exemption from any SPRFMO Conservation and Management Measure it should be considered by the Scientific Committee, Compliance and Technical Committee, and Commission as per the procedures proposed for fishing for scientific purposes.

Fishing for scientific purposes

It is proposed that, given the potential for catch limits to be exceeded or the requirement for exemptions to Conservation and Management Measures, a more rigorous process be put in place to ensure that fishing for scientific purposes does not threaten the long-term conservation and sustainable use of fishery resources or the marine ecosystems in which the resources occur.

It is proposed that fishing for scientific purposes should require recommendation by the SPRFMO Scientific Committee and approval by the Commission before commencing.

This would require the submission of a fishery research plan to the Scientific Committee for review at its annual meeting. The fishery research plan proposal would include, and Scientific Committee would assess against the following criteria:

-  i. Consistency of the research objective(s) with the objective of the SPRFMO Convention and the work plan of the Scientific Committee;
- ii. Likelihood of the research to achieve its objective(s);
- iii. Sustainability of proposed levels of catch; and
- iv. Any expected impact on the wider marine ecosystem.

Where the Scientific Committee considers the research will contribute to the sustainable management of SPRFMO fishery resources, it will provide a recommendation to the Commission, and consider the research when providing advice on relevant catch limits.

Where the Scientific Committee considers a proposal is not consistent with the criteria or is unlikely to achieve the stated objectives, it can recommend to the Commission that the proposal not go ahead, or that no specific allowance be made within (or in addition to) any catch limit for the research, or that the proponents re-submit a revised proposal to the next Scientific Committee meeting.


This process is intended to give the Scientific Committee oversight on research activities that may impact on the sustainability of fisheries resources or the marine ecosystems in which these resources occur, to provide quality assurance on proposals, and also to ensure that there is a mechanism for the promotion of important research, including in areas with low catch limits.


If any exemptions are requested from SPRFMO Conservation and Management Measures, the plan should also be considered by the Compliance and Technical Committee before progressing to the Commission to ensure that there are no unacceptable technical or compliance risks that arise from the research proposal.

Working through some hypothetical examples:

Continuous Plankton Recorder

A commercial fishing vessel transiting the SPRFMO Convention Area will tow a continuous plankton recorder to collect information on productivity in the South Pacific Ocean.

The quantity of fishery resources (planktonic organisms) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM. 

The flag state would be required to ensure the vessel is on the registered list of vessels, the Secretariat is notified at least two weeks (14 days) in advance of the first trip  and the flag state will report on the research in its Annual Report to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work given the quantity of fishery resource expected to be taken is low and of negligible commercial value.

Benthic biodiversity survey

A research or fishing vessel is intending to carry out a survey of benthic biodiversity in the SPRFMO Convention Area. The survey will include the use of epibenthic sled sampling, Deep Towed Imaging System (DTIS) camera transects, and grab sampling over a wide area of the Convention Area.

The quantity of fishery resources (sedentary benthic species) taken will not have any commercial value, and therefore this would be considered 'scientific research' under this proposed CMM.

However, as benthic species are considered a fishery-resource, and the use of an epibenthic sled or grab sampling could be described a gear likely to come in contact with the seafloor or benthic organisms, this research would be required to comply with CMM-03-2019.

As such, the research would only be able to be undertaken within the Management Areas currently defined in CMM-03-2019 unless an exemption were requested, in which case the research would need to be considered by the Scientific Committee, Compliance and Technical Committee, and Commission.

Therefore, this would be considered 'fishing for scientific purposes', and a fishing research plan would need to be submitted to the Scientific Committee.

Comment: It would not matter in this case what type of vessel were to undertake the work, however any activities of the vessel that may occur on the same trip (e.g. commercial fishing during the same voyage) would be considered by the SC, CTC, and Commission during consideration of the research plan.

Acoustic survey

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Alternately, if the survey required the taking of commercial quantities of catch but all catch was accounted for within a Members' allocation and activities were entirely consistent with existing CMMs, this would also be considered 'scientific research'.

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Comment: This scenario is somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Depletion experiment

A commercial vessel is proposing a depletion experiment whereby they plan to estimate the biomass of one or more fish species associated with underwater topographical features within existing bottom line fishing areas

Because a depletion experiment requires sufficient catch to be taken to suppress catch rates substantially within an area, the quantity of catch required is likely to be relatively large compared with current low catch limits for bottom fishing species other than orange roughy. Thus, the catch is very likely to be sold, and it is possible that catch in excess of a Member's allocation may be required.

If the depletion experiment was conducted using bottom line fishing methods, this experiment would be considered 'fishing for scientific purposes', and the proponents would be required to submit a fishing research plan to the Scientific Committee for consideration by the SC, CTC, and Commission.

If the depletion experiment was conducted using an entirely different method (such as potting or trapping), this experiment would be considered a new or exploratory fishery, and the proponents would be required to follow the procedures specified in CMM-13-2019. 

Comment: Both scenarios are somewhat unlikely at this stage, but it seems pragmatic to consider now and future-proof the Conservation Management Measure to ensure that the CMM objective is fit for purpose.

Tagging studies


A Member state is proposing that its commercial fishing vessels will carry out tagging studies on jack mackerel, releasing live tagged fish after their capture.

Assuming that there is not currently any 'landings obligation' in SPRFMO, the return of tagged fish to the sea would not be inconsistent with any SPRFMO CMMs. However, it may require clarification in regards to the reporting requirements (CMM02-2018).

Given that this research would not be expected to result in any take of fishery resources outside of Member allocations, and would not require any exemptions from CMMs, this would be considered 'scientific research'.

Trawl survey

A Member state is proposing that a research vessel carry out a trawl survey focused on estimating abundance of squid in the SPRFMO Convention Area.

Provided that the Member state is intending to report all catch of squid and other associated species in a manner consistent with the data standard (CMM-02-2018), and comply with all other relevant  Ms, this would be considered scientific research and require only notification to the Secretariat and reporting in the Member's Annual Report.