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Background document: A Proposal for a research fishing Conservation and
Management Measure for SPRFMO

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**A proposal for a research fishing Conservation and Management
Measure for SPRFMO**

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1. Purpose of paper

This paper provides background information on the proposed Conservation and Management Measure to facilitate Scientific Research within the SPRFMO Convention Area.

2. Rationale for a Conservation and Management Measure

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.

Additionally, Article 1 of the Convention defines 'fishing' 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.

The subsequent definition of 'fishery resources' as 'all fish within the Convention Area, including: molluscs; crustaceans; and other living marine resources as may be decided by the Commission', means that any activity in the Convention Area that might reasonably be expected to result in the catch of almost any marine organisms (e.g plankton or copepods) is considered fishing and is therefore subject to all Conservation and Management Measures.

As a result, research activities that are not directed at key SPRFMO target species (jack mackerel, squid, and bottom fishing species), would currently be considered to be exploratory fisheries and therefore require an application of approval for the activity. This can deter scientific activities that contribute to global understanding of the marine environment and fisheries resources.

Although notification is not required, to date, Members intending to carry out research in the SPRFMO Convention Area have notified the Secretariat and other SPRFMO Members. However, this approach is *ad hoc* and it is unknown if all research activities are notified.

In order to better enable research activities, and to ensure that SPRFMO Commission and Members are aware of all research activities in the SPRFMO Area, it is proposed that the Commission adopts a new Conservation and Management Measure to manage research activities in the Convention Area.

3. Scientific Committee

The initial proposal for a new Conservation and Management Measure to facilitate research in the Convention Area was presented to the 6th meeting of the Scientific Committee. The Scientific Committee:

- **Noted** the current lack of a mechanism to provide for research activities in the SPRFMO Convention Area;
- **Recommended** 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
 - Research that will have additional impacts on SPRFMO target species or the wider ecosystem should have a high probability of meeting research objectives and contributing to SPRFMO's objectives and the Scientific Committee's work plan
 - Catch of fishery resources taken during scientific research should be accounted for within sustainable yield estimates, catch limits, and estimates of stock status as appropriate.
- **Agreed** that two categories of research (low-impact research and fishing research) be defined in the Conservation and Management Measure to enable research activities in the Convention Area
- **Recommended** that, based on the risk to sustainability and the importance of avoiding significant adverse impacts on VMEs, low-impact research be defined as research meeting either of two scenarios:
 - 1) Where there is not expected to be any additional impact on SPRFMO target species or the wider ecosystem, **noting** that 'additional impact' will need to be clearly defined,
 - or
 - 2) Where the research will be carried out during normal fishing operations and all catch will be accounted for within current impact assessments and catch limits.
- **Suggested** that criteria to define 'additional impact' for the purposes of defining 'low-impact' research, should consider a maximum catch of species for which there is a SPRFMO catch limit, a limit on the amount of bottom contact, a limit on total fish catch in the research, and impact on the ecosystem in the course of a year.

- **Recommended** that research that is expected to have additional impact on target species or the wider ecosystem be assessed by the Scientific Committee against the key principles and the Commission consider each proposal based on advice from the Scientific Committee, including potential advice on incorporation of the research catch within relevant catch limit advice, noting that ‘additional impact’ will need to be clearly defined.
- **Recommended** to the Commission that low-impact research be notified to the Secretariat at least two weeks in advance, containing information on the planned activities including but not limited to:
 - Vessel(s) to be involved
 - General area of research
 - Expected timeframe for research
 - Objectives of the research (e.g. biomass estimate for X species)
 - Expected maximum catch
 - Expected bottom contact area (if any)
- **Agrees** that New Zealand will work intersessionally with other members to provide advice on a definition of ‘additional impact’ to inform development of a draft CMM to be presented to the Commission in January 2019.

The proposed draft Conservation and Management Measure is consistent with these recommendations, although it does not address potential management of fishing research. Further inter-sessional work will be undertaken following the Commission meeting to develop proposals to amend the Conservation and Management Measure to include fishing research.

4. General Principles

The objective of the Convention focuses on long-term conservation and sustainable use of fishery resources to safeguard the marine ecosystem in which these resources occur. Meeting this objective requires understanding of the marine ecosystem, including fishery resources, vulnerable marine ecosystems (or indicator taxa), and the wider environment in which these occur. With that in mind, we propose that the following general principles should apply in respect of research in the SPRFMO Convention Area:

- i) Research should be enabled within sustainable limits
- ii) Different types of research should be recognised and considered in terms of the risks and opportunities for the fishery resources and the marine ecosystems in which these resources occur within the SPRFMO Convention Area
- iii) Research that requires the catch of significant amounts of fishery resources should have a high probability of meeting research objectives and contributing to SPRFMO’s objectives and the Scientific Committee’s work plan
- iv) Catch of fishery resources taken during scientific research should be accounted for within sustainable yield estimates, catch limits, and estimates of stock status as appropriate

5. Defining research types

It is proposed that research in the Convention Area be categorised to allow for appropriate consideration based on the estimated risk to fishery resources (Appendix I).

Low-Impact Research

It is proposed that research will be classified as 'low-impact' where any impacts on fisheries resources are either negligible or already considered in SPRFMO management.

For the purposes of the proposed Conservation and Management Measure, 'low-impact research' will be defined as research where all fish (as defined in the Convention) taken will either be accounted for within a national allocation (or reported as part of normal fishing activity), or will comprise no more than one tonne (total) of all fish other than orange roughy, zero take of orange roughy, and no more than 1 km² of contact with the seabed. These thresholds are considered necessary to ensure that commercial fishing is not carried out under the 'guise' of 'low impact' research. The values are somewhat arbitrary and rationale for these is provided below.

For the one tonne of all fish other than orange roughy, this number is arbitrary and considered to be nominal on the scale of the fisheries, but sufficiently low to ensure that commercial fishing is not happening under the guise of 'low impact' research.

Orange roughy has a different threshold because of the small volume of the fishery, and the behaviour of the fish (dense aggregations) which increases the likelihood for significantly large catch to be taken in a single fishing event. It is considered unlikely that research activities would expect to catch orange roughy but provide robust assurance that catch would not become significant.

The threshold of no more than 1 km² of contact with the seabed is based on the estimated bottom contact from a dedicated benthic sampling voyage that New Zealand has previously completed in the SPRFMO Convention Area. The survey comprised 25 sampling sites using an epibenthic sled sampling techniques and was estimated to have contacted less than 1 km² over the course of the research. Impact at this scale is considered to have a negligible impact on the benthos at the scale of the Convention Area.

Examples of 'low-impact research' include:

- towing of Continuous Plankton Recorders while transiting the Convention Area;
- a survey of benthic habitats using imaging and/or direct sampling techniques; and
- a survey in a current fishery (e.g. jack mackerel, squid, or bottom fishing) where any catch taken during the survey will be accounted for within a national allocation and the fishing activity is no different to standard commercial fishing.

Fishing Research

Fishing Research is where there is an expectation that a larger quantity of fishery resources will be taken during the research. This type of research may be required to support the assessment of stock status and estimates of sustainable yields. This includes both trawl and acoustic biomass surveys where fish must be taken to support biomass estimation and to

provide biological samples to inform estimates of population age or size structure and to inform interpretation of acoustic snapshots.

It is proposed that any research that does not meet the requirements of 'low-impact research' (e.g., if the likely catch cannot be covered by national allocations) will be considered fishing research.

Fishing research can be important for ongoing monitoring of fishery resources, and a clear process should be developed to ensure that this kind of scientific work is encouraged, but with sufficient oversight so as to ensure that commercial fishing is not carried out as 'research'. Developing this process may require adjustments to the currently proposed thresholds for 'low impact' research, and will require careful consideration of the differences between scientific research and exploratory fisheries (the difference likely to be related to the objectives of any voyage).

The proposed CMM does not address requirements for fishing research at this time. New Zealand proposes that if specific management measures are desired by the Commission, this will be considered inter-sessionally and an updated proposed to the conservation and management measure at the 8th Commission meeting in 2020.

6. Proposed requirements

Low-Impact Research

For low-impact research, no additional impact on the sustainability of any fishery resource is expected, and therefore it is considered that SPRFMO Members should be made aware of this research, but no specific approval be required. Any vessel being used to carry out low-impact research must, however, be included in the Commission record of vessels authorised to fish in the SPRFMO Convention Area, and information on the research be provided to the Secretariat to aid in documenting ongoing research in the Convention Area.

Pre-notification

It is proposed that for all low-impact research, notification must be provided to the Secretariat (and subsequently to SPRFMO Members) at least 15 days prior to the commencement of any research. This is consistent with CMM05-2016 (Record of Vessels).

The notification must include:

- details on the vessel(s) involved;
- the general location of the research;
- the expected timeframe for the research;
- the objectives of the research;
- the expected maximum catch (by species if these include target species for substantive SPRFMO fisheries); and
- the expected total bottom contact area (if any).

It is proposed that Members be able to provide a multi-year notification (up to five years) for some types of low-impact research, in particular, standard activities like towing continuous plankton recorders during transit through the Convention Area.

Post-notification

Members completing low-impact research will provide an annual summary of the research in their Annual Report to the Scientific Committee that includes sufficient detail to allow for Members to have a clear picture of all research completed in the Convention Area and potential associated impacts on fisheries resources, and enable future collaboration.

This information will be summarised by the Secretariat for the Scientific Committee annually.

Table 1: Summary of types of research and associated requirements

Catch and area thresholds	Location	Catch within allocation/ current catch limit?	Category	Requirements
Under threshold	Convention Area	N/A	Low-Impact	<ul style="list-style-type: none"> • Pre-activity notification (15 days) • Reported in Annual Report
Over threshold	Areas open to fishing	Yes	Low-Impact	<ul style="list-style-type: none"> • Pre-activity notification (15 days) • Reported in Annual Report • All catch reported within national allocation/catch limit
Over threshold	Areas open to fishing	No	Fishing Research	<ul style="list-style-type: none"> • As per CMM13-2016 (New and Exploratory Fisheries)
Over threshold	Areas closed to fishing	N/A	Fishing Research	<ul style="list-style-type: none"> • As per CMM13-2016 (New and Exploratory Fisheries)