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DSCC Briefing to the SPRFMO Annual Meeting

DSCC



Briefing Paper for the 9th Meeting of the Compliance and Technical Committee
and the 10th Meeting of the Commission of the
South Pacific Regional Fisheries Management Organisation

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This paper addresses the issues arising in the 9th Meeting of the Compliance and Technical Committee and the Tenth Meeting of the SPRFMO Commission. It addresses Agenda items 3(a) Report of SC-9 and (b) 2022 SC Workplan; 6 CMMs: 6 b new CMMs; and c3 CMM 03-2021 Bottom Fishing (COMM10-Prop10)

DSCC Recommendations

The Deep Sea Conservation Coalition (DSCC) recommends as follows:

Item 3(a) Report of SC-9

4.3 VME Encounter thresholds - and taxa and catchability: that the Commission recommends the SC work on catchability is prioritised and that SC should be requested to review all taxa thresholds with a view to ensuring the levels are precautionary, taking into account the current knowledge of catchability. This should include updating the taxa list of vulnerable species.¹

4.6 Review process regarding encounters with VMEs: that the Commission should note the need for further development of the encounter protocol and request the SC to prioritise its further development

4.7 Reported encounters with VMEs: that the Commission assesses significant adverse impacts (SAI) on vulnerable marine ecosystems (VMEs) at the scale of the Encounter Area, notes that reopening the Encounter Area may result in SAIs on VMEs and that the encounter area should remain closed, with the Encounter Area being 5 NM from the encounter

4.8 CMM 03 request regarding ongoing appropriateness of the measure: that the Commission should note that the plan of work on spatial scales for assessing protection levels is not appropriate for managing the effects of bottom trawling on VMEs.

4.10 Bottom protection scenarios: that the Commission recommends that this work be discontinued. It is unlikely to provide useful scientific information in line with Convention and international obligations, and the available resources would be better directed at implementing agreed international commitments.

New CMMs: EU New CMM on 2022: DSCC considers that rather than devise a new CMM for the proposed EU exploratory fishery, which would be in an EBSA, and the work plan proposed by Chile should be allowed to run. If the EU continues to propose fishing in the area, even after any IUU matters are addressed, it should do so through CMM 13-2021

c3 CMM 03-2021 Bottom Fishing: on [COMM10-Prop10](#) DSCC supports the suggestion of a review in 2025 following the 2023 review which is to take into account the UN General Assembly review in 2022. The review should be substantive following the UNGA review and suitable times for the following review should be decided in 2022, with sufficient resources and time set aside to allow for substantive review, addressing both scientific and policy issues.

Climate change: DSCC suggests that the Commission takes note of the growing impacts of climate change on the marine environment and initiates work to request the SC and establishes an intersessional working group to review existing CMMs and make recommendations to the Commission. A short paper is attached to this briefing.

Compliance and Technical Committee

Amaltal Apollo

In 2019, CTC-6 [agreed](#)² that the *Amaltal Apollo* had been involved in IUU activities during May 2018 by conducting 14 bottom trawl tows in closed areas. In the [7th CTC meeting](#) in Vanuatu, the CTC agreed to remove the *Amaltal Apollo* from the 2020 draft IUU list “in light of the effective action taken by New Zealand and the commitment to provide quarterly reports on the progress and outcome of the prosecution case against the AMALTAL APOLLO”.³ At the time DSCC commented that the confiscation of the catch seemed to be the only effective action taken – and that is not an effective action – it is not punitive; it is not a sanction; it is simply depriving the offender of the fruits of its IUU activity. Now, nearly over 3 years later, the prosecution is

still not concluded. The claim that New Zealand has taken effective action cannot be sustained. Simply initiating a prosecution does not constitute effective action so as to remove a vessel from an IUU list. [CMM 04-2020](#) provides that CTC shall remove a vessel from the Draft IUU Vessel List if the flag State demonstrates that “effective action has been taken in response to the IUU fishing activities in question, including, inter alia, prosecution and/or imposition of sanctions of adequate severity.”⁴ The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing ([IPOA-IUU](#)) provides that States should ensure that sanctions are of “sufficient severity to effectively prevent, deter and eliminate IUU fishing and to deprive offenders of the benefits accruing from such fishing”⁵ and the Fish Stocks Agreement in Article 19(2) provides that “[s]anctions applicable in respect of violations shall be adequate in severity to be effective in securing compliance and to discourage violations wherever they occur and shall deprive offenders of the benefits accruing from their illegal activities.” Confiscation of the catch at most deprived the offenders of the benefits accruing from their illegal activities; a separate test.

Therefore SPRFMO has the obligation to place the *Amaltal Apollo* on the IUU list until such time as effective sanctions have been applied.

Lord Howe Encounter Incident

In the 9th Scientific Committee, SC-9, and the preceding Deepwater Workshop, New Zealand presented SC9-DW09, a review of a 2020 New Zealand VME encounter on Lord Howe Rise.⁶ That [report](#) noted that “Some details relative to the encounter were withheld to prevent identification of the vessel, pending an ongoing compliance investigation on the case by the New Zealand fisheries authorities. Once the investigation is complete, or if a formal prosecution is instigated, the full details of the encounter will be publicly available and communicated to the SPRFMO Secretariat for circulation to Members and CNCs. These details were considered not relevant to this review.”

This appears to provide the basis of presumed IUU activities under [Measure 04-2020](#). Under that Measure, Members and CNCs shall transmit every year to the Executive Secretary their list of vessels presumed to be carrying out IUU fishing activities in the Convention Area over the past two years, accompanied by suitably documented evidence concerning the presumption of IUU fishing activity.

This draft IUU list is not made available to Observers. This defect in transparency in such an important aspect of SPRFMO needs to be rectified. There is no reason for it to be hidden from bone fide observers. In the meantime, DSCC can only bring this matter to the attention of the CTC and the Commission. There are no reasons for the continued secrecy. New Zealand should disclose the full details and the CTC should place the vessel on the provisional IUU list.

Nazca and Solas y Gomez Ridge Fishing

As noted below, the EU fishing activities appear to constitute engaging in fishing for fishery resources whose flag State has no quotas, catch limit or effort allocation, or engage in fishing activities contrary to any other SPRFMO CMMs - under CMM 04-2020, an fishery is and exploratory fishery if it has not been subject to fishing in the previous ten years. We are not aware of the contents of the draft IUU list, but it seems that the vessel(s) in question should be placed on the provisional IUU list.

Scientific Committee Advice

The [SC-9 Report](#) requires careful reading and different matters related to bottom fishing are addressed below.

4.3 VME Encounter thresholds - and taxa and catchability

SC-9, noting the need for the SC to provide more biologically meaningful guidance on appropriate VME thresholds recommends to the Commission that it adds to the VME Encounters and Benthic Bycatch task in the SC Multi-Annual Work Plan a 2023+ subtask to develop a research programme within the SPRFMO Convention Area to allow the determination of taxon-specific estimates of catchability (catchability is a measure of the quantity the taxa is caught in the net versus the impacted taxa that is left on the seabed) for VME indicator taxa.⁷ The SC recommended that in the interim, the best available catchability estimates are used to improve the Commission's understanding of the implications of the current encounter thresholds with regard to preventing significant adverse impacts on VMEs.

This is because it has been increasingly apparent in the SC discussions that catchability is a key uncertainty in designing encounter thresholds and subsequent actions. Very simply, very small percentages of taxa such as coral and sponges are retained in the net and brought all the way to the deck of the fishing vessel.

Pitcher et al in *Progress with investigating uncertainty in the habitat suitability model predictions and VME indicator taxa thresholds underpinning CMM 03-2019 (SC7-DW21 Rev1)* (2019) found that “fish trawls may catch only ~100 g/Ha of coral when benthic cover with corals is about 4%, only ~100 g/Ha of sponges when benthic cover with sponges is about 9%, and only ~100 g/Ha of gorgonians when benthic cover with gorgonians is about 16%.”

Likewise, with respect to encounters, SC-9 “noted that reviews of future encounters would be improved by the explicit use of catchability to support more robust review outputs.”⁸ Weight thresholds should take into account catchability.⁹ This is why catchability was added to the SC workplan.¹⁰

But while this work is being carried out, it is essential that this key uncertainty is reflected in the measure including weight thresholds. DSCC is so concerned that both the ecosystem approach and the precautionary approach are not being properly applied that it submitted a [paper](#) to SC-9, “Precautionary approach and ecosystem approach in the context of prevention of SAI on VMEs”. The precautionary approach requires that when providing advice, the Scientific Committee should “be more cautious when information is uncertain, unreliable, or inadequate.”¹¹

A trawl catch of 250 kg of corals could scale to a seabed contact of more than 33–104 t of corals on the seabed, or taking the estimated impact proportion of 0.82¹² ([Mormede et al.](#) 2017),¹³ this contact range may translate to seabed impacts of more than 27–85 tonnes of coral impacted – or taking the current 60 kg threshold for stony corals, from 6.5 tonnes to 20 tonnes.¹⁴

Let us say that one more time: 19 tonnes of stony corals (Scleractinia) may be destroyed on the sea floor before the current threshold is even triggered. And as Mormede *et al* noted, “fishing effort at repeatedly fished locations near the summit of preferred seamounts is still sufficiently concentrated that the cumulative impact approaches 100.”¹⁵

This key uncertainty of catchability has implications for all decisions made with respect to taxa. Specifically, the SC should be requested to review all taxa thresholds with a view to ensuring the levels are precautionary, taking into account the current knowledge of catchability.

4.6 Review process regarding encounters with VMEs

SC-9 after considerable discussion, including regarding issues of spatial scale and of catchability, agreed that the protocol be further developed intersessionally and as science advances or to reflect any changes to the CMM.¹⁶ The Commission should note this need for further development.

4.7 Reported encounters with VMEs

The key point of disagreement with this issue is the spatial scale for an incident which has only been partially reported by New Zealand. Paragraph (e) reflects this:

e. Noting that the Commission is still deliberating on appropriate levels of protection; the SC recommended that:

i) If assessing SAI on VMEs at the scale of FMAs, reopening the Encounter Area would likely not result in SAI on VMEs; and

ii) If assessing SAI on VMEs at the scale of the Encounter Area, reopening the Encounter Area may result in SAIs on VME.

The bottom fishing measure [CMM 03-2021](#) provides that:

33. Taking into account the Scientific Committee's review of each encounter and its advice on management actions, at its next annual meeting, the Commission shall determine management actions for each encounter area, which may include: the closing of some areas to some or all bottom fishing gear, temporal restrictions, spatial restriction, reopening areas. Management actions determined by the Commission will apply as appropriate, unless otherwise determined, from the conclusion of the relevant Commission meeting

The alternative competing recommendations reflects the need for a policy decision on the "appropriate levels of protection". New Zealand's [position](#),¹⁷ reflected in option (i), is the result of confusion derived from its long-standing argument that significant adverse impacts (SAIs) can be assessed at the scale of Fishery Management Areas (FMAs). This argument is inconsistent with the United Nations General Assembly resolutions and the FAO Guidelines.

FAO Deep-sea Guidelines paras 17 and 18 provide as follows:

Significant adverse impacts

17. Significant adverse impacts are those that compromise ecosystem integrity (i.e. ecosystem structure or function) in a manner that: (i) impairs the ability of **affected populations** to replace themselves; (ii) degrades the long-term natural productivity of habitats; or (iii) causes, on more than a temporary basis, significant loss of species richness, habitat or community types. **Impacts should be evaluated individually, in combination and cumulatively.**

18. When determining the scale and significance of an impact, the following six factors should be considered:

- i. the intensity or severity of the impact at the **specific site being affected**;
- ii. the spatial extent of the impact relative to the availability of the habitat type affected;
- iii. the sensitivity/vulnerability of the ecosystem to the impact;
- iv. **the ability of an ecosystem to recover from harm**, and the rate of such recovery;
- v. the extent to which ecosystem functions may be altered by the impact; and
- vi. the timing and duration of the impact relative to the period in which a species needs the habitat during one or more of its life history stages. (emphasis added)

An ordinary reading of paragraph 18 makes it very clear that the specific site being affected is the relevant scale. The ability of the ecosystem to recover from harm shows that it is the harm to that impacted ecosystem – that VME – that is the issue. Likewise, the impact should be evaluated individually, as well as in combination and cumulatively (with other impacts). There is simply no support in the FAO Guidelines for assessing an impact against the entire Fishery

Management Area – which is based only on the target fish stock being managed and which is obviously far bigger than the VME impacted and is not an ecosystem in itself, comprising many ecosystems.

United Nations General Assembly Resolutions

UNGA resolution [61/105](#)¹⁸ in paragraph 83(c) reads that:

(c) In respect of areas where vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold water corals, are known to occur or are likely to occur based on the best available scientific information, to close such areas to bottom fishing and ensure that such activities do not proceed unless it has established conservation and management measures to prevent significant adverse impacts on vulnerable marine ecosystems; and

(d) To require members of the regional fisheries management organizations or arrangements to require vessels flying their flag to cease bottom fishing activities in areas where, in the course of fishing operations, vulnerable marine ecosystems are encountered, and to report the encounter so that appropriate measures can be adopted in respect of the relevant site.

The word “areas” is clearly referring to areas where VMEs are encountered: “areas where, in the course of fishing operations, vulnerable marine ecosystems are encountered”.

This paragraph, which establishes the encounter protocol, makes it crystal clear that “areas” are areas where bottom fishing activities are taking place – and the word “relevant site” makes it even more clear that the resolution is referring to the “relevant site” when it is referring to “areas”: “measures can be adopted in respect of the relevant site” Otherwise the encounter protocol would make no sense.

[UNGA resolution 64/72](#),¹⁹ in paragraph 119(b), makes it clear that “such areas” referred to in paragraph 83(c) of resolution 61/105 are the “areas” to be closed to bottom fishing, or have measures established to protect them:

(b) Conduct further marine scientific research and use the best scientific and technical information available to identify where vulnerable marine ecosystems are known to occur or are likely to occur and adopt conservation and management measures to prevent significant adverse impacts on **such ecosystems** consistent with the Guidelines, or close **such areas** to bottom fishing until conservation and management measures have been established, as called for in paragraph 83 (c) of its resolution 61/105;

(c) Establish and implement appropriate protocols for the implementation of paragraph 83 (d) of resolution 61/105, including definitions of what constitutes evidence of an encounter with a vulnerable marine ecosystem, in particular threshold levels and indicator species, based on the best available scientific information and consistent with the Guidelines, and taking into account any other conservation and management measures to prevent significant adverse impacts on vulnerable marine ecosystems, including those based on the results of assessments carried out pursuant to paragraph 83 (a) of resolution 61/105 and paragraph 119 (a) of the present resolution;

UNGA resolution [72/72](#)²⁰ (2017) makes this explicit in paragraph 185:

185. Recognizes that different types of marine scientific research, such as, inter alia, seabed mapping, mapping of vulnerable marine ecosystems based on information from the fishing fleet, on-site camera observations from remote vehicles, benthic ecosystem modelling, comparative benthic studies and predictive modelling have resulted in identification of **areas where vulnerable marine ecosystems are known or are likely to occur** and in the adoption of conservation and management measures to prevent **significant adverse impacts on such ecosystems**, including the closure of areas to bottom fishing in accordance with paragraph 119 (b) of resolution 64/72. (emphasis added)

This paragraph makes it clear that the “areas” where VMEs are known to occur” are the relevant ecosystems (“such ecosystems”) and that prevention of SAIs is to include closure of areas to bottom fishing.

In conclusion, there is absolutely no support in the UNGA resolutions that SAIs can be assessed on VMEs at the scale of FMAs. This matters: the SPRFMO Convention in Article 20 provides for the CMMs of SPRFMO to:

protect the habitats and marine ecosystems in which fishery resources and non-target and associated or dependent species occur from the impacts of fishing, including measures to prevent significant adverse impacts on vulnerable marine ecosystems and precautionary measures where it cannot adequately be determined whether vulnerable marine ecosystems are present or whether fishing would cause significant adverse impacts on vulnerable marine ecosystems.” (emphasis added)

The mandate in Article 20(1)(d) is to ‘protect’ habitats and marine ecosystems. Article 20(1)(d) also refers to “precautionary measures” where it cannot adequately be determined whether VMEs are present or whether fishing would cause SAIs on VMEs. This is entirely disregarded by the ‘spatial management’ approach proposed by New Zealand, which would tolerate SAIs on VMEs. Assessing SAIs on a “spatial scale” is the opposite of a precautionary measure, since there is inadequate information on VMEs, yet it allows fishing on them.

The SPRFMO provisions are also implementing the UN Fish Stocks Agreement, including:

- its preambular recital that Parties are “[c]onscious of the need to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimize the risk of long-term or irreversible effects of fishing operations”;
- the principle in article 5(g) to “protect biodiversity in the marine environment”; and
- the requirement in Article 5(6) to “apply the precautionary approach in accordance with article 6”.

The Convention also requires in Article 10 that the role of the Scientific Committee is to “(c) provide advice and recommendations to the Commission and its subsidiary bodies on the impact of fishing on the marine ecosystems in the Convention Area including advice and recommendations on the identification and distribution of vulnerable marine ecosystems, the likely impacts of fishing on such vulnerable marine ecosystems and measures to prevent significant adverse impacts on them.” The measures are to prevent SAIs on “them” – “them” being VMEs. Not Fisheries Management Areas (FMAs) or any other larger area.

Conclusion on 4.7 and the area to be closed.

In conclusion, whether applying the FAO Deep Sea Guidelines, the UNGA resolutions, the SPRFMO Convention or the Fish Stocks Agreement, it is abundantly clear that the assessment of SAIs on VMEs must be at the scale of the Encounter Area.²¹ Therefore the advice of the Scientific Committee is that “reopening the Encounter Area may result in SAIs on VME”, so the Area should not be reopened, and the Encounter Area should be defined 5 NM from the encounter, consistent with the precautionary approach.

It is past time to stop relying on the spatial management approach and habitat suitability index and return to the implementation of the UNGA resolutions and the SPRFMO Convention.

4.8 CMM 03 request regarding ongoing appropriateness of the measure

CMM 03-2021 in paragraph 31 asked the SC to “review and provide advice on the effectiveness of the applied management measures, including:

f) the appropriateness of the management approach (e.g. scale) to ensure the measure is achieving its objective and the objectives of the Convention.”

“The objective of the CMM together with CMM 03a-2021 (Deepwater Species) 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 deep sea fishery resources, including target fish stocks as well as nontarget or associated and dependent species, and, in doing so, **to safeguard the marine ecosystems in which these resources occur, including inter alia the prevention of significant adverse impacts on vulnerable marine ecosystems.**” Note that this is the prevention of SAIs on VMEs – not on the FMA, for instance.

The SPRFMO Convention in Article 1 is similar: “The objective of this 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.”

The precautionary approach and ecosystem approach are at the front of both objectives, and both require the Commission to “safeguard” the marine ecosystems.

The SC only agreed “that work had progressed in a number of areas in relation to addressing the ongoing effectiveness of management measures as requested by CMM03.²² In its discussion, SC-9 listed as a choice relevant to the appropriateness of the management of VMEs “What fraction of total VME indicator taxa abundance should be protected at a given spatial scale.” This at best is a confused rationalisation of the so-called spatial management approach. It assumes there is a choice in the spatial scale, rather than applying the UNGA requirements, and then goes further and suggests that only some fraction of total VME abundance should be protected – again contrary to the UNGA requirements. The SC-9 report also notes that DSCC commented that²³

[I]t is VMEs, rather than components, that are subject to prevention of SAI; that the UNGA resolutions and the FAO Guidelines make it clear that it is the site and VME level that SAIs must be prevented, that the fraction of total VME abundance protected is not and will not be known in the foreseeable future. The HSI model doesn't predict abundance and there are no proposals for research surveys, and that the UNGA resolutions and the FAO Guidelines make it clear that it is the site and VME level that SAIs must be prevented.”²⁴ SC-9 did note that “ecologically relevant spatial scales for assessing protection levels to prevent SAIs on VME indicator taxa still remain to be agreed, but that the existing information at the FMA is likely to be a more biologically appropriate compared with larger scales.

The Commission should note that the plan of work on spatial scales for assessing protection levels is not appropriate for managing the effects of bottom trawling on VMEs.

4.10 Bottom protection scenario

This was the request from the Commission²⁵ for spatial management scenarios for bottom trawling. This recommendation was, for reasons discussed under item 4.7 above (“review process”), inconsistent with the UNGA resolutions, the FAO Guidelines and practice in all other bottom fishing RFMOs. The SC “Recommended that the Commission consider the results of the spatial protection scenarios including to inform its determination of the level of protection required to prevent SAI on VMEs in the SPRFMO Convention Area.” and “Noted that ecologically relevant spatial scales for assessing protection levels to prevent SAIs on VME indicator taxa still remain to be agreed, but that the existing information at the FMA is likely to be a more biologically appropriate compared with larger scales.”²⁶

The goal stated in the relevant [paper](#)²⁷ “to establish optimal areas for the *minimisation* of SAIs on VMEs while minimising costs to the fishery” is succinctly stated, but is antithetical to both international law and policy - as well as science, as Professors Auster and Watling have [observed](#).²⁸ The required goal is *prevention* of SAIs, not their minimisation, and there is to be no

trade-off aimed in minimising costs to the fishery in preventing SAIs on VMEs. Article 192 of UNCLOS provides that States have the obligation to protect and preserve the marine environment: there is no exception for economic advantages. The freedom to fish provided for in Article 87 is expressly qualified in “subject to the conditions laid down in section 2”.

A core weakness of the approach taken is the failure to apply the ecosystem approach. Instead, it analyses certain taxa for which the modelers had data (due largely to benthic bycatch). Rather than describe ecosystems impacted by bottom trawling, the best it can do is describe some taxa impacted by bottom trawling. As Professors Watling and Auster pointed out, the two are very different concepts. This approach “cuts and dices” VMEs into individual taxa, and far from preventing SAIs on VMEs, can, at the most, predict the percentage of individual taxa which are projected to be destroyed or not destroyed. This is apart from the uncertainties involved. Uncertainties aside, the findings of the paper underline that even an 80% scenario (which would sanction the destruction of 20% of VMEs) is not achievable for all areas.

However, the paper suggests that these protection scenarios will support explicit consideration by the Commission of the trade-offs inherent in ensuring the long-term sustainable use of fisheries resources and the safeguarding of the marine ecosystems in which those resources occur. Such a conclusion advocating trading off VME protection with fishing is a breach of the Convention, international law and the UNGA resolutions. No authority is cited for the proposition and none can be: it is inconsistent with UNCLOS, the Fish Stocks Agreement, and the applicable UNGA resolutions.

DSCC recommends that the Commission recommends that this work be discontinued. It is unlikely to provide useful scientific information in line with requirements and the available resources would be better directed at implementing the UNGA resolutions and protecting VMEs.

Other RFMOs

Not one single other RFMO follows the ‘spatial management’ approach that New Zealand has advocated. DSCC has prepared a [detailed account](#) of approaches taken by RFMOs.²⁹ CCAMLR bans bottom trawling altogether and NAFO has [closed](#) the last seamount trawl fishery in the Northwest Atlantic, and CCAMLR, NAFO, GFCM, NPFC, SEAFO, and NEAFC have measures generally following the UNGA requirements, while SIOFA to date only an interim measure which largely reflects the UNGA requirements.

c3 CMM 03-2021 Bottom Fishing: COMM10-Prop10

The [tracked changes](#) version of CMM03 proposes a review of the measure in 2025 (para. 43), following the “review of the CMM in 2023, taking into account relevant technical information from the United Nations bottom fishing review scheduled for 2022, and any related resolutions adopted by the United Nations General Assembly. The Commission shall make any modification to the CMM as is required to meet its objective.” DSCC supports this suggestion.

EU New CMM on 2022 industry acoustic survey on Alfonsino and Redbait

This proposed new [CMM](#) and accompanying [background paper](#) are puzzling. Firstly, the proposal includes a pelagic survey haul for up to 100 tonnes. As such, the proposal is for an exploratory fishing and should fall within [CMM 13-2021](#), Management of New and Exploratory Fisheries in the SPRFMO Convention Area. Secondly, over 3000 tonnes of alfonsino and redbait were caught in 2021. This would appear to place those fishing activities under [CMM 04-2020](#), Establishing a List of Vessels Presumed to have Carried Out IUU Fishing Activities in the SPRFMO Convention Area, being 1(b) engaging in fishing for fishery resources whose flag State has no quotas, catch limit or effort allocation, or engaging in fishing activities contrary to any other SPRFMO CMMs: under CMM 04-2020, a fishery is an exploratory fishery a) if it has

not been subject to fishing in the previous ten years,³⁰ and is therefore subject to the requirements for a Fisheries Operation Plan and the other applicable provisions.

The area in question, being the Nazca and Salas y Gomez submarine ridges, are already designated as [EBSAs](#) (Ecologically or Biologically Significant Marine Areas) and are the subject of a proposed marine protected area, and the subject of a [paper](#) submitted by Chile to SC-9.³¹ The area has unique biodiversity that is marked by one of the highest levels of marine endemism and in an area which provide important habitats and ecological stepping stones for whales, sea turtles, corals, and a multitude of other ecologically important species, including 82 species that are threatened or endangered. It is one of the deepest light-dependent marine ecosystems on Earth.³² Establishing a new fishery in the area would not only undermine the proposed MPA but would put at risk these species. Instead, Chile's proposed plan of work, set out in the Multi-annual Workplan of the SC,³³ should be left to run.

DSCC considers that rather than being the subject of a new CMM, the work plan proposed by Chile should be allowed to run. If the EU continues to propose fishing in the area, even after any IUU matters are addressed,³⁴ it should do so through CMM 13-2021 and forward a proposal for review prior to next year's SC.

A detailed analysis of the proposed research plan is attached as Annex 1.

c3 CMM 03-2021 Bottom Fishing

On [COMM10-Prop10](#), DSCC supports the suggestion of a review in 2025 following the 2023 review which is to take into account the UN General Assembly review in 2022. The review should be substantive following the UNGA review and suitable times for the following review should be decided in 2022, with sufficient resources and time set aside to allow for substantive review.

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Endnotes

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- ¹ SPRFMO (2021). 9th Scientific Committee meeting report. 79 p. Wellington, New Zealand 2021. At <https://www.sprfmo.int/assets/2021-SC9/Report/SC9-Report-Final.pdf> (SC-9 Report) para 59.
- ² CTC-6 Report para. 53.
- ³ CTC-7 Report para. 133. At <https://www.sprfmo.int/assets/2020-Annual-Meeting/Reports/CTC7-Meeting-Report-10Mar2020.pdf>.
- ⁴ CMM 04-2020. Para. 12. At <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/2020-CMMs/CMM-04-2020-IUU-Vessel-List-31Mar20.pdf>.
- ⁵ IPOA-IUU para. 21. At <https://www.fao.org/3/y1224e/Y1224E.pdf>.
- ⁶ SC-9 Report para. 65.
- ⁷ SC-9 Report para. 56.
- ⁸ SC-9 Report para. 68.
- ⁹ SC-9 Report page 2, paras. 70, 71.
- ¹⁰ SC-9 Report para. 84.
- ¹¹ SPRFMO Convention Article 3(a)(i)
- ¹² The impact index was then calculated as a simple arithmetic combination of the individual gear component impacts, proportional to the relative area of their respective footprints.
- ¹³ Mormede, S., Sharp, B, Roux, MJ., Parker, S. (2017) Methods development for spatially-explicit bottom fishing impact evaluation within SPRFMO: 1. Fishery footprint estimation. SPRFMO SC5-DW06. At <https://www.sprfmo.int/assets/SC5-2017/SC5-DW06-Spatial-impact-assessment-method.pdf>.
- ¹⁴ Pitcher et al. 2019.
- ¹⁵ Mormede et al, page 17.
- ¹⁶ SC-9 Report para 64.
- ¹⁷ See NZ's review at Marco Milardi, Tiffany Bock and Shane Geange, New Zealand 2020 VME encounter review, Rev.1. At <https://www.sprfmo.int/assets/2021-SC9/SC9-DW09-rev1-New-Zealand-2020-VME-encounter-review.pdf>.
- ¹⁸ United Nations Resolution 61/105. Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments. Adopted 8 December 2006. At <https://undocs.org/A/RES/61/105>.
- ¹⁹ United Nations Resolution 63/72. Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments. Adopted 4 December 2009. At <https://undocs.org/A/RES/64/72>.
- ²⁰ United Nations Resolution 72/72. Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments. Adopted 45 December 2016. <https://undocs.org/A/RES/72/72>.
- ²¹ NZ defined the Encounter Area to be 1 NM encounter closure around the encounter trawl tow (NZ [encounter review](#) page 8) although DSCC consider that 5 NM would be the precautionary encounter area.
- ²² SC-9 Report Para. 73.
- ²³ SC-9 Report para. 78(e).
- ²⁴ SC-9 Report Para. 72.
- ²⁵ SPRFMO (2021). 9th SPRFMO Commission Meeting Report. Wellington, New Zealand. At <https://www.sprfmo.int/assets/0-2021-Annual-Meeting/Reports/COMM9-Report-Adopted.pdf>. The SC was asked to include in its workplan for 2021+ the development of spatial management scenarios for Bottom Trawling. This work will inform the Commission's determination of the level of protection required to prevent Significant Adverse Impacts on VMEs in the SPRFMO Convention Area. Scenarios should encompass protection levels of 70%, 80%, 90%, 95% for the modelled VME indicator taxa using temporally static and temporally dynamic assessment methods. The SC should also explicitly account for uncertainties in current model predictions, the relative availability of VME indicator taxa in an area, and recommendations from other RFMOs or guidance documents (if any) when formulating its recommendations to the Commission. Evaluations should be undertaken at spatial scales comparable to the Fisheries Management Areas described in SC8-DW07_rev1. Para. 67.
- ²⁶ SC-9 Report Para. 67.
- ²⁷ SC9-DW06_rev1. Development of Spatial Management Scenarios for Bottom Trawling. At <https://www.sprfmo.int/assets/2021-SC9/SC9-DW06-rev1-Development-of-Spatial-Management-Scenarios-for-Bottom-Trawling-untracked.pdf>

²⁸ SC9-Obs02. L. Watling and P. Auster. VMEs, Communities and Indicator Species - Confusing Concepts for Conservation of Seamounts. At <https://www.sprfmo.int/assets/2021-SC9/SC9-Obs02-VMEs-Communities-and-Indicator-Species-Confusing-concepts-for-conservation-of-seamounts.pdf> and published at <https://www.frontiersin.org/articles/10.3389/fmars.2021.622586/full>.

²⁹ Susanna Fuller, Duncan Currie, Matthew Gianni, Lyn Goldsworthy, Cassandra Rigby, Kathryn Schleit, Colin Simpfendorfer, Les Watling, Barry Weeber. Preventing Biodiversity Loss in the Deep Sea — A Critique of Compliance by High Seas Fishing Nations and RFMOS with Global Environmental Commitments. 2020. At <http://www.savethehighseas.org/resources/publications/preventing-biodiversity-loss-in-the-deep-sea-a-critique-of-compliance-by-high-seas-fishing-nations-and-rfmoss-with-global-environmental-commitments/>

³⁰ CMM 13-2021 para. 4(a).

³¹ Chile. SC9-Doc31_rev1. Paper on the High Seas of Nazca and Salas y Gomez Submarine Ridges. At <https://www.sprfmo.int/assets/2021-SC9/SC9-Doc31-rev1-Paper-on-the-High-Seas-of-Nazca-and-Salas-y-Gomez-Submarine-Ridges.pdf>.

³² SC9-Doc31_rev1 page 1.

³³ SC9 Report, Para. 206.

³⁴ DSCC is unaware of the contents of the [draft IUU list](#) as it is not available to observers.

Annex 1:

Response to proposed plan for a 2022 industry acoustic survey on alfonsinos and redbait (SC9-DW15_rev1)

The purpose of this document is to highlight several issues in the recent proposal for a proposed industry acoustic survey and pelagic survey trawls (catches) for up to 200 tons of alfonsinos and redbait submitted by the European Union to the Scientific Committee of the South Pacific Regional Fishery Management Organization (SC9-DW15_rev1). We also highlight the unique, fragile, and irreplaceable nature of this ecosystem and why these proposed fisheries are unsustainable and will cause significant damage to this global biodiversity hotspot.

The proposal was developed after 3000 tons of fish were caught in 2021, an activity for which exploratory fisheries procedures in the SPRFMO Convention Area ([CMM 13-2021](#)) were not followed. Specifically, these procedures require a Fisheries Operation Plan that would include among other things:

- “iv. any biological information on the target species from comprehensive research and/or survey cruises, such as distribution, abundance, demographic data and information on stock identity;
- v. details of non-target and associated or dependent species and the marine ecosystem in which the fishery occurs, the extent to which these would be likely to be affected by the proposed fishing activity and any measures that will be taken to mitigate these effects;
- vi. the anticipated cumulative impact of all fishing activity in the area of the exploratory fishery if applicable.”

Instead the European Union made a special proposal of their own, and a stated intention to develop a Conservation and Management Measure to which this proposal will likely be annexed. The proposal should have been submitted as an exploratory fishing proposal, since it has not been subject to fishing in the previous ten years (CMM 13-2021 para. 4); as such, it should not be allowed to proceed.

In addition to the procedural shortcomings, the proposal also includes numerous factual inaccuracies and does not accurately summarize the best science that is available for their proposed area of activities. First and foremost, the proposal fails to provide an accurate description of the marine ecosystem in which their target activities are proposed to take place, an area that is well known as one of the most important biodiversity hotspots on Earth (Parin 1991; Parin et al. 1997; CBD 2017; Friedlander et al. 2021; Friedlander & Gaymer 2021; Georgian et al. 2021; Wagner et al. 2021; Wagner et al. 2021b; and references therein).

The Nazca Ridge is one of the best surveyed locations on the high seas globally as a result of US, Soviet, Japanese, and Chilean scientific expeditions that have surveyed this area since the 1950s (reviewed in Parin et al. 1997; Wagner et al. 2021b). The most detailed of these were Soviet expeditions that occurred from 1973-1987 in the same area that is proposed for their acoustic survey (Parin et al. 1997), but also more recent efforts by the Chilean National Oceanographic Committee (1999 & 2016) and the Japan Agency for Marine-Earth Science and Technology (2019; Wagner et al. 2021b). Collectively, these expeditions found that the marine biodiversity of the Nazca Ridge contains the highest level of marine endemic species found anywhere in the world, as well as provides important habitats and ecological stepping stones for a multitude of ecologically important species, including 82 species that are threatened or endangered (reviewed in Wagner et al. 2021). These findings were used to underpin the recognition of this region by various international organizations, including as an ecologically or biologically significant marine area (EBSA) by Conference of the Parties to the Convention of Biological Diversity, an important area by the Global Ocean Biodiversity Initiative, an important area by the Global Census of Marine Life on Seamounts, and a Hope Spot by Mission Blue

(reviewed in Wagner et al. 2021). All of these international distinctions highlight the importance for increasing protections and are contrary to the expansion of fishing activities in this region.

The proposal further mentions that they caught 3000 tons of alfonsino and some redbait on the Nazca Ridge in 2021 and that such dense aggregations are not known from this part of the Pacific. This is incorrect. As noted above, the Nazca Ridge has been targeted by a multitude of scientific expeditions, the most detailed of which were Soviet expeditions that occurred during 1973-1987 in the very area that is proposed for the fishing survey (reviewed in Parin et al. 1997; Wagner et al. 2021b). These included expeditions by the R/V Poseidon in 1973, R/V Astronom in 1975, R/V Gerakl in 1975-1976, R/V Ikhtiadr and R/V Odissey in 1979-1983, R/V Akademik Kurchatov in 1982, R/V Professor Mesyatzev in 1983-1985, and R/V Shtokman in 1987 (reviewed in Parin et al. 1997; Wagner et al. 2021b). These surveys found high abundances of alfonsino and redbait in this region (Parin et al. 1997). Furthermore, high abundances of these species were also documented from nearby waters under Chilean jurisdiction, including those of Coastal Chile and the Juan Fernandez Archipelago (Witt et al. 2012; Porobic et al. 2019). In fact, a fishery targeting Alfonsino was established there in 1998, but after only 12 years collapsed in part due to the life history characteristics of this species (e.g., long-lived, slow growing, and late sexual reproduction), which make it vulnerable to overexploitation (Morato et al. 2006; Witt et al. 2012; Shotton 2016; Porobic et al. 2019).

The proposal further notes that most of the fish species that they identified from reported catch data in the target study area have a wide geographic distribution, occurring across the Pacific or even further. They further note that no fish species identified from these data have a localized distribution. These statements are incorrect, as the Soviet expeditions alone found that 44% of the 171 fish species recorded in this region occur nowhere else on Earth, as well as 51% of 192 species of invertebrates (Parin et al. 1997). While the proposal does acknowledge that their target region is known for high levels of endemism in shallow-water communities, it fails to recognize that similarly high levels of endemism have also been recorded in deeper waters of this region. Specifically, the Soviet surveys from 1973-1987 were conducted in waters deeper than 200 m, and found that nearly half of the species on this ridge are endemic to this region (Parin et al. 1997).

Additionally, the proposal mentions that the overlap of their target study area and the habitat of sea lions is likely to be none or very limited. This is incorrect. One species of sea lion (*Otaria byronia*) and two species of fur seals (*Arctocephalus philippii* and *Arctocephalus australis*) have known geographic ranges that intersect the proposed study area (IUCN 2021). All of these species have been recorded to migrate to far offshore areas, such as those of the target study area.

The proposal mentions that seven species of marine mammals have been identified for the proposed fishing area, citing Wagner et al. (2021) in support. It is important to highlight that this reference only reviewed those marine mammal species that are considered threatened or endangered, and not others, including the many data deficient species that have not yet been assessed for their endangered species status. There are many marine mammals that occur in this region, including the humpback whale (*Megaptera novaeangliae*), which is quite abundant in this region as shown by the many records in the Ocean Biodiversity Information System (OBIS 2021). Additionally, according to IUCN data 39 mammal species have geographic ranges that overlap their proposed study area, including 23 species of whales (*Eubalaena australis*, *Balaenoptera acutorostrata*, *Balaenoptera bonaerensis*, *Balaenoptera borealis*, *Balaenoptera edeni*, *Balaenoptera musculus*, *Balaenoptera musculus*, *Balaenoptera physalus*, *Feresa attenuata*, *Globicephala macrorhynchus*, *Globicephala melas*, *Megaptera novaeangliae*, *Orcinus orca*, *Phocoena spinipinnis*, *Kogia breviceps*, *Kogia sima*, *Physeter macrocephalus*, *Mesoplodon densirostris*, *Mesoplodon ginkgodens*, *Mesoplodon grayi*, *Mesoplodon peruvianus*, *Mesoplodon traversii*, *Ziphius cavirostris*), 13 species of dolphins (*Delphinus capensis*, *Delphinus delphis*, *Grampus griseus*, *Lagenodelphis hosei*, *Lagenorhynchus obscurus*,

Lissodelphis peronii, *Peponocephala electra*, *Pseudorca crassidens*, *Stenella attenuata*, *Stenella coeruleoalba*, *Stenella longirostris*, *Steno bredanensis*, *Tursiops truncatus*), and 3 species of eared seals (*Arctocephalus australis*, *Arctocephalus philippii*, *Otaria byronia*) (IUCN 2021).

The proposal mentions that most of the ridges in the proposed fishing area are deeper than 500 m, with some reaching shallower depths of 300 m. While most of these ridges have not been mapped with modern multibeam mapping technologies, satellite altimetry data indicates that some seamounts in the target study area are shallower than 300 m, and may even be as shallow as 100 m (Wagner et al. 2020; NOAA 2021).

The proposal mentions that there is an ongoing process to develop a new legally-binding instrument on the conservation and sustainable use of biodiversity of areas beyond national jurisdiction (BBNJ), and that this looks at deep-sea fisheries. This is incorrect as the draft text of the BBNJ treaty does not contain any language on deep-sea fisheries. Consequently, this proposal, and any decisions related to acoustic surveys and catch operations for alfonsino and redbait fall under the jurisdiction of SPRFMO.

In addition to the scientific and factual inaccuracies highlighted above, it is important to point out that fisheries for alfonsino and redbait have operated in several locations around the globe, most of which have led to rapid collapses in stocks. While the productivity for alfonsino is regarded as moderate, its biological characteristics make it susceptible to overfishing (Morato et al. 2006; Witt et al. 2012; Clark et al. 2016; Shotton 2016; Porobic et al. 2019). Specifically, much like the orange roughy, alfonsino exhibit a highly aggregated behavior and have been found to aggregate above seamounts in large schools (Shotton 2016). Their social characteristics in addition to unknown levels of population connectivity among seamounts, further reduces their resilience to fishing (Morato et al. 2006).

Alfonsino fisheries off the Azores and Corner Rise Seamounts in the 1970s only lasted a few years before they collapsed (Norse et al. 2012). Russian fishing for alfonsino on seamounts in the Mid-Atlantic dropped from 12,000 catches a year to below 2,000 in just two years (Morato et al. 2006). Not only were alfonsino populations negatively impacted and long to recover, but vulnerable marine ecosystems indicator species like deep-sea corals were also landed in large quantities as unwanted bycatch in these fisheries.

A review of alfonsino fisheries in adjacent Chilean waters indicates that there is limited knowledge on stock structure, migrations, and connectivity (Wiff et al. 2012). Industrial fisheries in the Juan Fernandez Islands off the coast of Chile that targeted orange roughy and alfonsino have now been closed due to overexploitation (Porobic et al. 2019). The EU's proposal to open an alfonsino fishery in the Nazca Ridge is a threat to this unique ecosystem. Past alfonsino fisheries have failed in the Azores (Norse et al. 2012), in the Juan Fernandez Archipelago (Porobic et al. 2019), and Corner Rise Seamounts (Morato et al. 2006). Extending these fisheries onto the Nazca Ridge would likely lead to similar outcomes.

Despite their environmental impacts, alfonsino fisheries continue to operate in some areas. In the Azores for example, alfonsino are regulated by the EU Common Fishery Policy. EUs quota for alfonsino fisheries has led to some of the highest discards from longline fisheries in the Azores (Fauconnet et al. 2019). This is because the quota for alfonsino in the Azores has been reached increasingly earlier in the season. However, fish quotas in the Azores were never reached for the other 145 species caught by longline fisheries (Fauconnet et al. 2019). As the number of discarded alfonsino by longline fisheries continues to increase, the EU is interested in finding other fishing grounds where their quotas will not be below what they are currently fishing.

Exploring fishing grounds for alfonsino fisheries in the Nazca Ridge pose a preventable threat to one of the most unique marine ecosystems on Earth (Parin 1991; Parin et al. 1997; CBD 2017; Friedlander et al. 2016; Friedlander & Gaymer 2021; Georgian et al. 2021; Wagner et al. 2021;

Wagner et al. 2021b; and references therein). Fishing for alfonsino in the nearby Juan Fernandez Archipelago has already failed to be sustainable, so exploration of fisheries targeting similarly fragile and unique ecosystems just north of this area is also likely going to be unsustainable and likely cause long-term damage to this global biodiversity hotspot.

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Annex 2:

SPRFMO and Climate Change

Lyn Goldsworthy

22 December 2021

The Intergovernmental Panel on Climate Change (IPCC) identified core impacts, mitigation and adaptation strategies that apply to SPRFMO jurisdiction and target species. The IPCC 2019 Special Report (Bindoff et al, 2019) identified the following observed and projected impacts of anthropogenic heating and acidification relating to SPRFMO:

- Range shifts in target and dependent and related species, driven by changing ocean currents;
- Alterations of the biogeochemical conditions and productivity of Eastern Boundary currents;
- Loss of habitat from coral bleaching;
- The decline of deep ocean oxygen; and
- Ocean acidification and its corresponding risk to marine biomass.

The IPCC agreed in 2014 (Pörtner et al 2014) that “*given the importance of the Ocean to all countries, there is need for the international community to progress rapidly to a ‘whole of ocean’ strategy for responding to the risks and challenges posed by anthropogenic ocean warming and acidification.*”

The Glasgow Climate Pact, “noting the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth,” “emphasizes the importance of protecting, conserving and restoring nature and ecosystems, including forests and other terrestrial and marine ecosystems, to achieve the long-term global goal of the Convention by acting as sinks and reservoirs of greenhouse gases and protecting biodiversity, while ensuring social and environmental safeguards.” (21)

Thus far, SPRFMO has not addressed the potential impact of climate changes on the resources for which they are responsible. Given the growing evidence of expected impacts on marine environments, it seems timely for SPRFMO to initiate work on collating scientific information on projected impacts and considering possible response actions.

A review of the literature provides a wide range of suggestions for appropriate management responses for marine environments experiencing rapid environmental changes associated with climate change (see e.g., CBD, 2017; CBD, 2019; FAO, 2002; FAO, 2007; FAO, 2009; FAO 2010; FAO, 2012; IPBES, 2019; Laffoley, 2020; Laffoley et al, 2019; Lo, 2016; Michonski & Levi, 2010; Pentz et al, 2018; Tittensor et al, 2019; UNFCCC, 2019). These include, *inter alia*:

- implementing the precautionary approach to address the current lack of certainty around predicted effects of rapid climate change on individual species and broader ecosystems and the potential advent of feedback loops;
- implementing the ecosystem approach to resource management to ensure that relationships between harvested species and those dependent or related, as well as the impact on broader ecosystems, are considered when determining sustainable fishery levels and controls;
- proactive research and monitoring to enhance early detection and understanding of climate change effects;
- establishing networks of marine protected areas explicitly designed to address both climate change and biodiversity loss;

- increasing international cooperation to maximise distribution of the latest available scientific information and joint scientific and policy initiatives;
- including climate impact considerations in all proposals and working documents to facilitate the integration of climate change considerations in decisions;
- adopting substantive precautionary and ecosystem-based protection and control measures for human activities;
- developing both medium (3–5 year) and long-term management strategy considerations, proposals and decisions to allow for dynamic and responsive action;
- strengthening monitoring and compliance measures to reduce impacts of unregulated activities that may exacerbate the effects of climate change; and
- incorporating values, uses and benefits beyond fisheries opportunities in management decisions.

Table 1 provides a summary of mechanisms, approaches or actions taken by SPRFMO against each of these proposals and provides some suggestions for going forward.

Table 1. Commission responses to climate change management options

POTENTIAL RESPONSE	EXISTING	PROPOSED ACTION GOING FORWARD
Precautionary approach	<p>Reference in Convention:</p> <ul style="list-style-type: none"> - Preamble - Article 2: Objective - Article 3: Conservation and Management Principles and Approaches - Article 8: Functions of the Commission - Article 10: Scientific Committee <p>References in several CMMs to need to apply</p>	<ul style="list-style-type: none"> - Review of CMMs to identify where specific consideration of climate impact should be included - Incorporation of climate impact statements in new CMMs and fisheries plans
Ecosystem-based approach (EBA)	<p>Reference in Convention:</p> <ul style="list-style-type: none"> - Preamble - Article 2: Objective - Article 3: Conservation and Management Principles and Approaches - Article 8: Functions of the Commission - Article 10: Scientific Committee <p>References in some CMMS to need to apply</p> <p>However, SPRFMO is yet to apply a consistent EBA approach to its management of specific fisheries</p>	<ul style="list-style-type: none"> - Incorporate EBA approach into all existing and new CMMs relating to management of species
Increased research and monitoring initiatives to progress understanding	<p>Research is ad hoc. No SPRMO-organised research and monitoring programs designed to identify or study climate impacts</p>	<ul style="list-style-type: none"> - Establish an intersessional SC working group to develop research and monitoring programs to progress understanding

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MPA network for biodiversity refugia and ecosystem resilience	<p>There is no explicit provision in SPRFMO for marine protection for biodiversity purposes or ecosystem resilience</p> <p>However: the following requirements provide openings for SPRFMO to pursue such protection</p> <ul style="list-style-type: none"> - Article 3 1(a)(vii) - Article 8 - Article 10 2(c) 	<ul style="list-style-type: none"> - Proactive and systematic identification of VMEs across the Convention area - Proactive and systematic identification of climate change-vulnerable species (both fished and unfished) and habitats - Initiate discussions on how to deliver appropriate protection for the above and to build ecosystem resilience in the Convention area
Strong international cooperation to maximise information sharing and joint initiatives	<p>Article 31 requires cooperation with FAO, other relevant UN agencies and with other relevant organisations.</p> <p>It has MOUs with US NOAA, WCPFC, RMIT University, CPPS, CCAMLR, ACAP and the Network for the Exchange of Information and Shared Experiences Between Latin American and Caribbean Countries to prevent, deter, and eliminate IUU fishing.</p>	<ul style="list-style-type: none"> - Review existing cooperative arrangements for opportunities for joint research and climate change response actions - Review other opportunities for such arrangements
Strong protection and control measures for human activities	Currently has 23 active CMMs	<ul style="list-style-type: none"> - Review capacity of each existing CMM and the CMMs as a group to deliver objective in a climate-changing world
Inclusion of climate change consideration in all decisions, including climate impact statements in fisheries notifications	Not yet considered or implemented	<ul style="list-style-type: none"> - Establish an intersessional SC group to develop advice on scientific requirements - Establish an intersessional Commission group to develop response plan options
Both 3–5 year and long-term management strategies and decision processes supporting responsive action	Not yet	
Strong monitoring and compliance to reduce unregulated activities	<p>References in Convention:</p> <ul style="list-style-type: none"> - Preamble - Article I: Definitions - Article III: Conservation and Management Principles and Approaches - Article VIII: Functions of the Commission <p>Number of CMMs designed to maximise compliance of Contracting Parties, including</p> <p>CMM 04 - IUU vessel list</p> <p>CMM 15 - on vessels without nationality in the Convention Area</p>	<ul style="list-style-type: none"> - Review existing Illegal, unreported and unregulated unreported fishing (IUU) mitigation measures to assess further requirements and opportunities - Review impact of non-compliance, including by Contracting Parties, and take actions to reduce.
incorporating values, uses and	Not yet considered or implemented	

benefits beyond fisheries opportunities in management decisions		
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Conclusion

SPRFMO's objective set out in Article 2 is affected in all parts by climate change, which threatens the long-term conservation and sustainable use of fishery resources and requires action to safeguard the marine ecosystems in which these resources occur. A dedicated work programme of action by SPRFMO is needed this could be initiated via an intersessional Working Group to report with recommendations to the next SPRFMO Commission meeting.

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