



Protecting Deep Sea Vulnerable Marine Ecosystems Under the United Nations General Assembly Resolutions and SPRFMO Convention

The United Nations General Assembly:

Reaffirms the importance of paragraphs 80 to 90 of resolution 61/105, paragraphs 113 to 127 of resolution 64/72 and paragraphs 121 to 136 of resolution 66/68 addressing the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks and the actions called for in those resolutions, and emphasizes the need for full implementation by all States and relevant regional fisheries management organizations and arrangements of their commitments under those paragraphs on an urgent basis- UNGA 71/123 (2016) (para 174)

Contents

Introduction.....	1
History of United Nations General Assembly Resolutions	2
Specific UNGA Requirements.....	7
SPRFMO Convention and Background.....	7
Move-on rule/cease fishing in areas where VMEs are encountered.....	13
Spatial Management.....	15
SPRFMO Convention and UNCLOS	16
Conclusion on SPRFMO.....	17
Significant Adverse Impacts in the FAO Guidelines.....	17
Conclusion	19

Introduction

These two paragraphs in the 2017 sustainable fisheries resolution underline the importance that the United Nations places both on protecting the deep sea, and the long-term sustainability of deep-sea fish stocks, and on the importance of honouring the commitments in the UNGA resolutions.

The Workshop agreed that further discussion needs to respect “the requirements of the UNGA, [SPRFMO Convention](#), and other guiding documents and agree on the scope of analysis and discussions for the workshop within the constraints of those documents.”

This briefing outlines the history of the resolutions and their content, and discusses relevant provisions in the SPRFMO Convention.

History of United Nations General Assembly Resolutions

The deep sea is one of the greatest reservoirs of biodiversity on Earth, home to unknown species and the cradle of life itself. Virtually every scientific expedition into the deep sea reveals previously undiscovered creatures or ecosystems. It remains the last great unexplored area of the planet and holds untold secrets. Yet as shallower and inshore stocks of fish have been depleted and fished out, the fishing industry has moved into deeper water in search of new species and fishing opportunities. The most commonly used method of the deep-sea fishers is bottom trawling, widely recognized to be the greatest direct threat to deep-sea species and ecosystems such as long-lived fish species and cold-water coral, sponge, and seamount ecosystems.

The first UNGA resolution to specifically address these concerns, resolution 57/141 adopted in 2002, encouraged “relevant international organizations” to “consider urgently ways to integrate and improve, on a scientific basis, the management of risks to marine biodiversity of seamounts and certain other underwater features within the framework of the Convention”.¹ In 2004, following two years of further debate at the United Nations Open-ended Informal Consultative Process on Oceans and Law of the Sea (known as UNICPOLOS, or ICP), the DSCC launched its campaign for a moratorium on bottom trawling on the high seas unless or until the fisheries were managed consistent with obligations under international law. The campaign was supported by two open letters from scientists (one of which was signed by over 1,600 scientists worldwide) calling for a moratorium on bottom trawling on the high seas.² In February of 2004 the 7th Conference of Parties to the Convention on Biological Diversity called on the UNGA and other relevant international and regional organizations to take urgent action to protect deep-sea ecosystem from destructive practices.³

¹ UNGA Resolution 57/141, para. 56.

² Marine Conservation Biology Institute. (2004). *Deep-sea coral scientist statement*. Retrieved from <https://mcbi.marine-conservation.org/what/dscstatement.htm>.

³ Convention on Biological Diversity. (2004). *Decisions adopted by the Conference of the Parties to the Convention on Biological Diversity at its Seventh Meeting. Decision VII/5: Marine and coastal biological diversity, Seventh Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity, 9–20 February 2004, Kuala Lumpur, Malaysia* (UNEP/CBD/COP7/21, Annex), paras. 60–61:

“60. Concerned about the serious threats to the biological diversity, stresses the need for rapid action to address these threats on the basis of the precautionary approach and the ecosystem approach, in marine areas beyond the limits of national jurisdiction, in particular areas with seamounts, hydrothermal vents, and cold-water corals, other vulnerable ecosystems and certain other underwater features, resulting from processes and activities in such areas;

61. Calls upon the General Assembly and other relevant international and regional organizations, within their mandate, according to their rules of procedure, to urgently take the necessary short-term, medium-term and long-term measures to eliminate/avoid destructive practices, consistent with international law, on scientific basis, including the application of precaution, for example, consideration on a case by case basis, of interim prohibition of destructive practices adversely impacting the marine biological diversity associated with the areas identified in paragraph 60 above. UNGA Resolution 61/105,”

In response to these and other expressions of public concern, the UNGA adopted resolution 59/25 in 2004 calling on States individually or through RFMOs “to take action urgently, and consider...the interim prohibition of destructive fishing practices, including bottom trawling that has adverse impacts on vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold water corals located beyond national jurisdiction, until such time as appropriate conservation and management measures have been adopted in accordance with international law”.⁴

Resolution 59/25 also committed the UNGA to review, in 2006, the actions taken by high seas fishing nations and RFMOs to implement this call for action. In the interim, discussions continued throughout 2005 and 2006 over the environmental impacts, legality and management of high seas bottom trawling in a variety of fora, including meetings of UNICPOLOS, the FAO Committee on Fisheries,⁵ and the UN Fish Stocks Agreement Review Conference in 2006.⁶

By that time, a number of countries were calling for various types of moratoria on bottom trawl fishing on the high seas until such time as the fisheries could be managed in accordance with obligations under international law, related to fisheries sustainability and the protection and preservation of the marine environment.

Intensive negotiations at the UNGA in November 2006 resulted in a compromise which was largely based on proposals put forward by those nations which allowed their vessels to bottom fish on the high seas. The UNGA concluded that, on the basis of the review, “additional actions are urgently needed”⁷ and adopted resolution 61/105 calling on high seas fishing States individually and through RFMOs to take a series of specific actions to manage bottom fisheries on the high seas “as a matter of priority, but not later than 31 December 2008”.⁸ These measures were intended to ensure the long-term sustainability of deep-sea fish stocks and to “prevent significant adverse impacts” on “vulnerable marine ecosystems” by bottom fisheries, or else ensure that such fisheries are “not authorized to proceed”.⁹ The specific actions were outlined in paragraph 83 of resolution 61/105 and included:

- A) Conduct impact assessments to determine whether bottom fishing activities would have significant adverse impacts on VMEs or on the long-term sustainability of deep-sea fish stocks;
- B) Identify VMEs and determine whether bottom fishing activities would cause SAIs to such ecosystems and the long-term sustainability of deep sea fish stocks

⁴ UNGA Resolution 59/25, paras. 66–71.

⁵ FAO. (2005). *Report of the twenty-sixth session of the Committee on Fisheries, Rome, 7–11 March 2005* (FAO Fisheries Report No. 780). Rome: FAO. 2005, paras. 83–95.

⁶ UNGA. (2006). *Report of the Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 22–26 May 2006*. (UN Doc. A/CONF.210/2006/15), paras. 56–59.

⁷ UNGA Resolution 61/105, para. 82.

⁸ UNGA Resolution 61/105, para. 83.

⁹ UNGA Resolution 61/105, para. 83.

- C) Close areas of the high seas to bottom fishing where VMEs are known or likely to occur and “ensure that such activities do not proceed” unless the bottom fishing in such areas can be managed to prevent significant adverse impacts on vulnerable marine ecosystems;
- D) Require flag States and RFMOs to ensure that vessels flying their flag cease bottom fishing activities in areas where, in the course of fishing operations, VMEs are encountered.

Following the adoption of resolution 61/105 in 2006, a number of States were of the view that in order to facilitate its implementation it was necessary to establish a common agreement on the operational definition of key terms in the resolutions. In March 2007 it was therefore agreed at the 27th Session of the FAO Committee on Fisheries that States would negotiate, under the auspices of the FAO, an international set of guidelines for the implementation of resolution 61/105. This would, *inter alia*, establish an agreed set of operational criteria for conducting impact assessments of deep-sea fisheries, identifying VMEs, and defining “significant adverse impacts”. The FAO subsequently held an Expert Consultation on deep-sea fisheries to draft the guidelines in September 2007, followed by two rounds of intergovernmental negotiations (referred to as FAO “Technical Consultations”) to formally negotiate and adopt the International Guidelines for the Management of Deep Sea Fisheries in the High Seas in 2008.

In 2009, the UNGA again reviewed the actions taken by States and RFMOs to implement the bottom fisheries provisions of the previous UNGA resolution, in this case resolution 61/105. Based on the review, the UNGA adopted resolution 64/72, which reaffirmed and strengthened the commitments contained in resolution 61/105, and endorsed the new FAO Guidelines.¹⁰

There have been two reviews of the bottom fishing regulations: one in 2011 and one in 2016. The review in 2011 included a report of the Secretary General and a two-day UNGA workshop involving presentations and a debate amongst representatives of States, RFMOs, NGOs, the fishing industry and deep-sea scientists regarding the implementation of the resolutions. The UNGA concluded again that the actions taken since the adoption of previous resolutions revealed major shortcomings in their implementation, and emphasized “the need for full implementation by all States and relevant regional fisheries management organizations and arrangements of their commitments ... on an urgent basis”.¹¹ Resolution 66/68 followed the 2011 review. It emphasized the importance of conducting impact assessments and making them public, and called for further actions by States and RFMOs to:

- a) Strengthen procedures for both carrying out impact assessments to take into account individual, collective and cumulative impacts, and for making these assessments publicly available;
- b) Establish and improve procedures to ensure that assessments are updated when new conditions or information so require;
- c) Establish and improve procedures for evaluating, reviewing and revising, on a regular basis, assessments based on best available science and management measures; and

¹⁰ FAO Deep Sea Guidelines.

¹¹ UNGA Resolution 66/68, para. 122.

- d) Establish mechanisms to promote and enhance compliance with the applicable measures related to the protection of VMEs in accordance with international law.¹²

In 2012, the Rio+20 conference resulted in The Future We Want, which in paragraph 168 stated that

“We also commit to enhance actions to protect vulnerable marine ecosystems from significant adverse impacts including through the effective use of impact assessments. Such actions, including those through competent organizations, should be undertaken consistent with international law, the applicable international instruments and relevant General Assembly resolutions and Food and Agriculture Organization (FAO) Guidelines.”

In 2016, bottom fishing review, as it had in 2011, also involved a two day workshop. Resolution 71/123 includes important calls to States and RFMOs relevant to SPRFMO’s work which need to be implemented. The UNGA was concerned that some deep-sea fishing activities in certain areas are being carried out without full implementation of relevant paragraphs of previous resolutions, representing a threat to VMEs. Some key outcomes included in resolution 71/123 included:

Joint Meetings: The UNGA encouraged bottom fishing RFMOs to share experiences and good practices, for example by considering organizing joint meetings.¹³

*Specific calls:*¹⁴

- (a) to use the full set of criteria in the Guidelines to identify where VMES occur or are likely to occur as well as for assessing significant adverse impacts (SAIs);
- (b) to ensure that impact assessments, including for cumulative impacts, are:
- conducted consistently with the FAO Guidelines, particularly paragraph 47,¹⁵

¹² UNGA Resolution 66/68 para. 129.

¹³ UNGA resolution 71/123 para. 55.

¹⁴ UNGA resolution 71/123 para. 180.

¹⁵ FAO Deep Sea Guidelines (2009) 47. Flag States and RFMO/As should conduct assessments to establish if deep-sea fishing activities are likely to produce significant adverse impacts in a given area. Such an impact assessment should address, inter alia:

- i. type(s) of fishing conducted or contemplated, including vessels and gear types, fishing areas, target and potential bycatch species, fishing effort levels and duration of fishing (harvesting plan);
- ii. best available scientific and technical information on the current state of fishery resources and baseline information on the ecosystems, habitats and communities in the fishing area, against which future changes are to be compared;
- iii. identification, description and mapping of VMEs known or likely to occur in the fishing area;
- iv. data and methods used to identify, describe and assess the impacts of the activity, the identification of gaps in knowledge, and an evaluation of uncertainties in the information presented in the assessment;
- v. identification, description and evaluation of the occurrence, scale and duration of likely impacts, including cumulative impacts of activities covered by the assessment on VMEs and low-productivity fishery resources in the fishing area;
- vi. risk assessment of likely impacts by the fishing operations to determine which impacts are likely to be significant adverse impacts, particularly impacts on VMEs and low-productivity fishery resources; and

- are reviewed periodically and are revised thereafter whenever a substantial change in the fishery has occurred or there is relevant new information, and
- where such impact assessments have not been undertaken, they should be carried out as a priority before authorizing bottom fishing activities;

(c) To ensure that measures are based on and updated on the basis of the best available scientific information, noting in particular the need to improve effective implementation of thresholds and move-on rules;

Marine Scientific Research: The UNGA recognized¹⁶ that different types of marine scientific research (MSR), such as, *inter alia*, seabed mapping, mapping of VMEs 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 VMEs are known or are likely to occur and in the adoption of conservation and management measures to prevent SAIs on VMEs, including the closure of areas to bottom fishing in accordance with paragraph 119 (b) of resolution 64/72;

Acting on MSR: The UNGA encouraged States and RFMOs to consider the results available from different types of MSR, including those listed in above, concerning the identification of areas containing VMEs, and to adopt measures to prevent SAIs from bottom fishing on VMEs, consistent with the FAO Guidelines, or to close such areas to bottom fishing until such measures are adopted, as well as to continue to undertake further MSR;¹⁷

Addressing knowledge gaps: The UNGA also encouraged States and RFMOs to carry out further MSR to address the remaining knowledge gaps, in particular with regard to fish stock assessments, and to base and update measures on the best available scientific information;¹⁸

Protecting fish stocks: The UNGA called upon States and RFMOs to adopt measures, including monitoring, control and surveillance measures, on the basis of the best available scientific information, including stock assessments, to ensure the long-term sustainability of deep-sea fish stocks and non-target species and the rebuilding of depleted stocks, consistent with the FAO Guidelines and, where scientific information is uncertain, unreliable or inadequate, to ensure that measures are established consistent with the precautionary approach, in particular with regard to vulnerable, threatened or endangered species.¹⁹

These very specific recommendations highly relevant to SPRFMO were adopted after a comprehensive review of the implementation of previous resolutions. These in turn were informed by the UN Secretary General's report and the stakeholder workshop held at the UN in August in which the SPRFMO secretariat, key bottom fishing States and observers, both industry

vii. the proposed mitigation and management measures to be used to prevent significant adverse impacts on VMEs and ensure long-term conservation and sustainable utilization of low-productivity fishery resources, and the measures to be used to monitor effects of the fishing operations.

¹⁶ UNGA resolution 71/123 para. 181.

¹⁷ UNGA resolution 71/123 para. 182.

¹⁸ UNGA resolution 71/123 para. 183.

¹⁹ UNGA resolution 71/123 para. 186.

and NGOs, participated. SPRFMO should ensure that they are implemented faithfully and instruct the Scientific Committee accordingly. A further review will be held in 2020.²⁰

Specific UNGA Requirements

UNGA resolutions 59/25 (2004), 61/105 (2006), 64/72 (2009), and 66/68 (2011) called for urgent action to protect VMEs from the harmful impact of destructive bottom fishing practices.²¹ Resolution 61/105, supplemented by resolution 64/72 committed States and RFMOs to:²²

- (i) conduct impact assessments of individual bottom fisheries and cumulative impacts²³ of bottom fishing;
- (ii) identify vulnerable marine ecosystems (VMEs) and determine whether bottom fishing activities would cause significant adverse impacts (SAIs) to VMEs and the long-term sustainability of deep sea fish stocks;
- (iii) close areas where VMEs are known or likely to occur to bottom fishing unless the fishing can be managed to prevent SAIs on VMEs,
- (iv) require to cease bottom fishing activities in areas where VMEs are encountered, and to report the encounter so that appropriate measures can be adopted in respect of the relevant site; and
- (v) ensure sustainable levels of catch and bycatch of deep-sea species, including the rebuilding of depleted stocks or else not authorize bottom fisheries to proceed.²⁴

In regard to the management of deep-sea bottom fisheries, important achievements since the adoption of the UNGA resolutions include:

SPRFMO Convention and Background

Interim measures for the management of high seas bottom fisheries in the Convention Area were first adopted in 2007, and then reviewed in 2009. These were implemented by New Zealand (whose vessels had been fishing in the area for the previous two decades) through high seas

²⁰ UN resolution 71/123 para. 192.

²¹ UNGA. (2004). *Resolution 59/25. 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* (UN Doc. A/RES/59/25, 17 January 2005); UNGA. (2006). *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* (UN Doc. A/RES/61/105, 6 March 2007); UNGA. (2009). *Resolution 64/72. 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* (UN Doc. A/RES/64/72, 19 March 2010); UNGA. (2011). *Resolution 66/68. 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* (UN Doc. A/RES/66/68, 28 March 2012).

²² UNGA resolution 61/105 para. 83

²³ UNGA resolution 66/68 para. 129.

²⁴ UNGA resolution 64/72 paras. 119(d), 120.

fishing permits that came into effect in 2010.²⁵ Australia similarly implemented a variety of management measures for the SPRFMO Area during this period.²⁶

The SPRFMO Convention entered into force on 24 August 2012 and the first meeting of the SPRFMO Commission took place in January 2013. CMM 2.03 for the regulation of bottom fishing was adopted at the second meeting of the Commission in 2014, to replace the interim measures for bottom fisheries adopted in 2007 and 2009. At the fourth Commission meeting in 2016, the measure was slightly amended to become CMM 4.03.²⁷ CMM 4.03 largely incorporates the measures agreed on an interim basis in 2007 by establishing a historic existing fishing footprint area, a bottom fishing impact assessment, a catch limitation, a move-on rule in some areas within the footprint,²⁸ and provisions for fishing outside the footprint on the basis of a prior impact assessment.²⁹ CMM 2.03 provided that the CMM shall apply for two years and would be reviewed at the meeting of the Commission in 2016. But that review did not take place and the date was changed to 2017 when revised as CMM 4.03. It will therefore take place after the next UNGA review.

New Zealand, Australia and Chile have agreed to work together intersessionally in an *ad hoc* working party to recommend revisions to CMM 4.03 to be presented to the 2017 fourth Scientific Committee. The Workplan calls for the Scientific Committee to “[d]evelop a scientifically robust spatial management approach for bottom fisheries in order to appropriately protect VMEs while enabling viable fisheries to operate”.³⁰ However, as discussed below, a spatial management approach is only appropriate if there is adequate information, the precautionary approach is taken into account, VMEs are protected, and the sustainability of target and bycatch stocks are assured.

At the third Scientific Committee meeting, in 2015, the High Seas Fisheries Group (HSFG) from New Zealand called for the removal of the move-on rule in favor of spatial management. New Zealand representatives argued that the move-on rule was difficult to monitor. However, DSCC stressed that the provisions of UNGA resolutions 61/105, 64/72 and 66/68, and the FAO Guidelines need to be implemented, and expressed concern that (then) CMM 2.03 still required some amendments in order to be consistent with these international commitments. The move-on

²⁵ New Zealand, Ministry of Fisheries. (2008, December). *Bottom fishery impact assessment: Bottom fishing activities by New Zealand vessels fishing in the high seas in the SPRFMO Area during 2008 and 2009*, p. 1, retrieved from <http://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-06-2008/a-Miscellaneous-Documents/New-Zealand-Bottom-Fishery-Impact-Assessment-v1.3-2009-05-13.pdf>.

²⁶ Williams, A., SPRFMO, & Council for Scientific and Industrial Research (CSIRO). (2011, July). *Bottom fishery impact assessment, Australian report for the South Pacific Regional Fisheries Management Organisation (SPRFMO)* (Report No. SWG-10-DW-01a), Hobart: CSIRO, pp. 20–21, retrieved from <https://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-10-2011/SWG-10-DW-01a-Australian-BFIA-Final-Report.pdf> (Williams *et al*).

²⁷ SPRFMO. (2016, March 16). *CMM 4.03: Conservation and management measure for the management of bottom fishing in the SPRFMO Convention Area*, retrieved from <http://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/CMM-4.03-Bottom-Fishing-2016-4Mar2016.pdf>. Paragraph 27 was amended to reflect a review in 2017 instead of 2016.

²⁸ There is an exception for New Zealand’s division of areas into areas open to bottom fishing, areas closed to bottom fishing and areas where the move-on rule applies. CMM 4.03, para. 8(h).

²⁹ CMM 4.03, para. 8.

³⁰ SPRFMO. (2016). *Scientific Committee workplan for 2016* (SPRFMO COMM-04 (2016)), Annex D, retrieved from <https://www.sprfmo.int/meetings/commission-meetings/4/> [2016 SC Workplan].

rule has affected only six tows in total from 2008 to 2013, or an average of 3.3% of tows in the area subject to the rule per year. Only about half the footprint open to NZ trawling is subject to the New Zealand move-on rule. New Zealand has annually reported bycatch of corals, sponges and other invertebrates from areas open to fishing but not individually reported this information as VME taxa.³¹

The method established to delineate the area of the footprint has been the subject of much debate. This is primarily because it allowed for 20 minute longitude by 20 minute latitude grid blocks of ocean space surrounding any area where any trawling had occurred between 2002 and 2006 (including even a single trawl tow) to be included in the ‘footprint’. According to New Zealand, the result was “exponentially increasing exaggeration of the mapped footprint in comparison with actual seabed impact area of individual trawl tracks”.³² In reality, this means that vast areas of the seabed of the South Pacific that are not likely to have ever been previously impacted by bottom trawl fishing were incorporated into country footprints. The footprint of New Zealand’s high seas bottom trawl fishery, for example, includes 218 such blocks, each approximately 800–1,200 km² in size, depending on the latitude.³³

With respect to the establishment of the fishing footprint,³⁴ New Zealand stated in 2015 that estimates of the ‘fished area’ generated using any mapping resolution other than actual trawl tracks substantially exaggerated the areas within footprints that have actually been impacted. The Scientific Committee recommended that the smallest practical spatial scale should be used for defining footprints and for spatial management purposes.³⁵

Australia, New Zealand and Spain/EU submitted benthic impact assessments to the SPRFMO Scientific Committee in 2007 and 2008. These are available on the SPRFMO website.³⁶ The reports by New Zealand and Australia contained detailed information on the nature of their bottom fisheries, the impacts of bottom fishing on VMEs on the high seas, and the regulations both countries have established pursuant to the UNGA resolutions and the interim measures adopted in 2007. However, neither report complies with the FAO Guidelines when measured against the criteria for impact assessments contained in paragraph 47, nor, by extension, do they comply with UNGA resolutions 61/105 or 64/72, as there is no assessment of the potential impacts on VMEs in areas where bottom fisheries are authorized to occur. Also both assessments were completed before the SPRFMO benthic impact assessment standard was finalised and adopted in 2009.

³¹ SC-04-17 New Zealand Annual Report, September 2016, p 44.

³² New Zealand Ministry of Fisheries (2008), p. 22.

³³ New Zealand Ministry of Fisheries (2008) p. 18–21.

³⁴ SPRFMO. (2009). *Collated comments by participants on the New Zealand Bottom Fishery Impact Assessment* (SPRFMO Doc. SP-07-SWG-DW-02), retrieved from <http://www.southpacificrfmo.org/assets/7th-Meeting-May-2009-Lima/DW-Subgroup-VII/SP-07-SWG-DW-02-Collated-comments-on-NZ-bottom-fishing-impactassessment.pdf>.

³⁵ At present the most practical spatial scale is 6-minute blocks; and for defining the extent of fishery impacts on VMEs the longest time period of historic effort information that is available for each fishery should be used provided that the quality (accuracy and completeness) of the positional data is adequate. SPRFMO. (2015). *Report of the 3rd Scientific Committee meeting, 28 September – 3 October 2015, Port Vila, Vanuatu*, p. 12 [2015 SC Meeting].

³⁶ Retrieved from <http://www.sprfmo.int/cmms/benthic-impact-assessments/>.

These impact assessments were all submitted prior to the adoption of UNGA resolution 66/68 in 2011. None of them contain any analysis of the cumulative impacts that would be called for in this resolution especially as the New Zealand and Australian footprints overlap.

SPRFMO provided a draft ‘Revised Draft Bottom Fishery Impact Assessment Standard’ (BFIAS) in 2009,³⁷ on which the Australian Impact Assessment was later based.³⁸ The draft however, failed to make it clear that fishing should not be allowed in areas where VMEs are known or likely to occur unless SAIs on VMEs can be prevented; nor did it establish adequate threshold quantities of VME indicator species for the move-on rule or explicitly require an assessment of the impact on non-target and most bycatch fish species, including ‘low productivity’, rare or endemic species. New Zealand stated that it intended to review its impact assessment in 2010, when it planned to review its implementation of the interim measures more fully;³⁹ this has not yet been done. Cumulative impacts are still not being assessed.

The Australian Impact Assessment, carried out in 2011, concluded that the overall risk of SAIs on VMEs by Australian vessels fishing with bottom trawls and bottom-set-auto-longlines “is low”.⁴⁰ However, this assessment relied solely on estimates of the scale of impacts and not an assessment of whether individual bottom fishing activities would cause significant adverse impacts on VMEs, or whether bottom fisheries authorized by Australia can be managed to prevent significant adverse impacts on VMEs, as explicitly called for in paragraph 83 of UNGA resolution 61/105, and in subsequent UNGA resolutions.

Neither the New Zealand or Australian assessments have been updated, nor has a joint assessment been developed to look at the combined and cumulative impact of bottom fishing by both Australian and New Zealand vessels, as well as by other vessels that engaged in bottom fishing in previous years.

New Zealand’s management regime involves a mixture of open, closed and ‘move-on’ blocks.⁴¹ New Zealand closed a substantial portion of its footprint to bottom fishing, including some areas where VMEs are known or likely to occur, by closing all previously “lightly trawled” areas within its footprint and approximately 15% of the “moderately” and “heavily” trawled areas within its footprint. The effect of these measures has been to eliminate bottom trawling in 41% of the total 217,463 km² that fall within the New Zealand bottom trawl footprint surface area; a further 30% (the moderately trawled areas) of the area was made subject to a move-on rule, and the remaining 29% (the heavily trawled areas) left open to bottom trawling with no constraints.⁴²

In its 2009 comments on the New Zealand approach to managing bottom fisheries, the US expressed serious concerns that the 20 minute blocks allow the incorporation of large swaths of “new” areas that would not otherwise have been included in the SPRFMO bottom fishing footprint if a smaller block area was used. It also asserted that the size of the 20 minute blocks

³⁷ SPRFMO. (2008). *Revised draft bottom fishery impact assessment standard, 8th International Meeting, Science Working Group* (SPRFMO Doc. SP-08-SWG-DW-01), retrieved from <https://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-08-2009/SP-08-SWG-DW-01-Revised-draft-SPRFMO-Bottom-Fishing-Impact-Assessment-Standard.doc.pdf>.

³⁸ Williams *et al.*

³⁹ New Zealand Ministry of Fisheries (2008), p. 14.

⁴⁰ Williams *et al.*, p. viii.

⁴¹ Williams *et al.*, pp. 18–19.

⁴² Williams *et al.*, p. 19.

allows bottom fishing in "new" or previously unfished areas, even in "heavily trawled blocks". The US expressed additional concerns regarding the lack of information on the specific impacts of fishing gear types on the seabed, and on the impacts of bottom fishing on target species other than orange roughy, as well as on bycatch species.⁴³

New Zealand replied that it is not actually feasible for vessels to accurately trawl exactly the same track as trawled previously, notwithstanding the substantial improvements in navigational equipment over the past decade. In a paper prepared by New Zealand government officials, Penney *et al* cite analysis conducted by O'Driscoll & Clark (2005)⁴⁴ which shows that vessels do not repeat their trawl tracks when fishing seamount features typically targeted in the deep-water trawl fisheries, and that although there are some directional preferences on certain seamounts related to the topography of the seamount concerned, in other instances vessels may conduct radial trawls on seamounts from almost any direction.⁴⁵ Thus even on heavily trawled seamounts, areas of the seamount which have not been previously fished may still be vulnerable to the impact of continued bottom fishing. New Zealand also reported that most of the bottom trawling over the past several years has taken place in the heavily trawled blocks (where no restrictions are in place) given industry reluctance to operate in areas where a move-on rule is in place, but that within the heavily trawled blocks there were reports that new, previously unfished, features were being fished.⁴⁶ Despite this, New Zealand has reported bycatch of corals, sponges and other invertebrate species (many of which are VME taxa) in its annual reports.⁴⁷

It was also pointed out by New Zealand that the areas where their vessels are authorized to bottom fish represent only 0.13% of the entire SPRFMO Area.⁴⁸ However, it is important to note that Parker *et al* estimate that the footprint areas where New Zealand vessels are authorized to fish actually comprise approximately 16% of the SPRFMO area seabed shallower than 2,000 meters, and thus accessible to fishing.⁴⁹ Moreover, in 2009, Penny *et al* provided a more precise breakdown of the size of New Zealand's bottom fisheries footprint, and the areas open to bottom trawl fishing within the footprint, in relation to the overall area of seabed at various depths located within the SPRFMO Convention Area, which is presented in Table 7.⁵⁰

⁴³ SPRFMO Collated Comments, p. 2.

⁴⁴ O'Driscoll, R. L. & Clark, M. R. (2005). Quantifying the relative intensity of fishing on New Zealand seamounts. *New Zealand Journal of Marine and Freshwater Research*, 39, 839–850.

⁴⁵ Penney, A., Clark, M., Dunn, M., Ballara, S., & Consalvey, M. (2007). *A descriptive analysis of New Zealand bottom trawl catch & effort in the proposed Convention Area of the South Pacific Regional Fisheries Management Organisation* (Doc. SPRFMO-IV-SWG-05), p. 8.

⁴⁶ New Zealand Ministry of Fisheries (2008), pp. 73–74.

⁴⁷ E.g. SC-04-17 New Zealand Annual Report, September 2016, p 44.

⁴⁸ *Op. cit.*, p. 28, Table 7.

⁴⁹ Parker, S. J., Penney, A. J., & Clark, M. R. (2009). Detection criteria for managing trawl impacts on vulnerable marine ecosystems in high seas fisheries of the South Pacific Ocean. *Marine Ecology Progress Series*, 397, 309–317 at p. 310. doi: 10.3354/meps08115.

⁵⁰ Penny, A. J., Parker, S. J., & Brown, J. H. (2009). Protection measures implemented by New Zealand for vulnerable marine ecosystems in the South Pacific Ocean. *Marine Ecology Progress Series*, 397, 341–354 at p. 349, Table 3.

Table 7. New Zealand’s bottom fisheries footprint and areas open to bottom trawl within SPRFMO Convention Area

Depth range meters (m)	SPRFMO area (km ²)	Bottom trawl footprint % of seabed in SPRFMO area				Footprint Total %	Approximate size of seabed where bottom trawl fishing permitted (km ²)
		Closed	Open (Move-on rule)	Open (no Move-on rule)	Open Total		
0–200	552	100	0	0	0	100	0
200–800	43,101	35.5	40.0	14.6	54.6	90	23,533
800–2,000	497,305	9.0	4.9	8.2	13.1	22.0	65,147
> 2,000	53,309,911	0.1	0	0	0	0.1	0
Total	53,850,868	0.2	0.1	0.1	0.2	0.4	88,680

Source: Penney *et al*, at note 203. Additional information is provided in the far right column here based on the calculations and information from the table and text from Penney *et al*.

To summarize these findings, New Zealand vessels are prohibited from bottom trawling anywhere within the SPRFMO area at depths shallower than 200 meters; they are permitted to bottom trawl fish in over half – 54.6% – of the entire seabed area in the SPRFMO area at depths between 200 and 800 meters, an area equal to approximately 23,533 km², and so on. These figures may have altered slightly as a result of changes to the open and closed footprint blocks reported by New Zealand in its report to SPRFMO in 2015.⁵¹

New Zealand reports that of the 42 large seamounts within its overall footprint, 11 fall within the now closed areas and the remaining 31 are located within the areas where bottom fishing is permitted.⁵² The 59% of the footprint that remains open is likely to include areas that had not been fished prior to 2007 as a result of the large size of the blocks of ocean space that are included in the footprint. Indeed, New Zealand reported in 2009 that fishing vessels were finding – and bottom trawl fishing on – previously unfished features (e.g. seamounts, hills, knolls, rises) within areas of the footprint classified as having been “heavily” fished in the past, and that “much of the successful fishing effort was targeted at these new areas” within the footprint.⁵³ In other words, far from being confined to fishing in areas already ‘heavily’ impacted by bottom trawling in the past, New Zealand vessels apparently were fishing primarily on seamounts and in other areas within the ‘footprint’ where bottom trawling had not previously taken place. None of these fisheries were assessed for potential significant adverse impacts on VMEs as far as the DSCC is aware. Rather the assumption appears to have been that the risk of impacts on VMEs

⁵¹ SC-03-DW-03. New Zealand notification of amendments to the status of blocks within its bottom fishing footprint. 6p.

⁵² New Zealand Ministry of Fisheries (2008), p. 29.

⁵³ New Zealand Ministry of Fisheries (2008), p. 73.

was likely to be low because few VMEs would occur in these ‘heavily fished’ areas because they would not have survived the impact of bottom trawl fishing occurring in the past.

In a 2013 review of the Australian and New Zealand footprints in the SPRFMO area, Penny provided estimates of the extent unfished areas located within the footprint, noting that “estimates of the ‘fished area’ generated using any mapping resolution other than actual trawl tracks substantially exaggerate the areas within the footprints that have been impacted, with inclusion of substantial unfished areas within these ‘fished footprint’ maps”. He concluded that some 95% to 96% of a footprint mapped using 20-minute degree blocks, as SPRFMO has done, would not have been previously fished.⁵⁴ He went on to state that predictive habitat modelling studies indicated that there would be a “high probability of occurrence of vulnerable scleractinian corals and octocorals in unfished areas contained within the ‘fished footprint’” and that under UNGA resolutions, the expectation would be that VMEs occurring within ‘previously fished’ areas will be protected from significant adverse impacts, necessitating measures to protect these VMEs “irrespective of whether they occur within or outside ‘previously fished areas’”.⁵⁵

Move-on rule/cease fishing in areas where VMEs are encountered

A move-on rule has been adopted by New Zealand, but the rule is only applicable to 30% of the high seas areas where New Zealand vessels are currently permitted to bottom trawl fish. Bottom fishing in the ‘heavily fished’ blocks of the New Zealand footprint is not covered by the rule. In its National Report to the SPRFMO Scientific Committee in 2015, New Zealand reported that the move-on rule was only triggered six times between 2008 and 2013, representing an average of 3.3% of tows per year in the areas where the move-on rule applies.⁵⁶ This rate of triggering move-on events is less than the predicted rate of about 8%,⁵⁷ probably due to catch rates of VME indicator taxa in the SPRFMO Convention Area being lower than in areas inside the New Zealand EEZ. The move-on-rule was triggered either by exceeding one or more of the weight thresholds of individual VME indicator taxa, or by exceeding the maximum permitted count (3) of indicator taxa that make up the biodiversity component of the evidence process.⁵⁸

New Zealand did not state where the encounters occurred, or whether the areas within 5 nm of the encounter were subsequently closed to bottom fishing by all vessels or whether only the vessel that had exceeded the threshold and triggered the move-on rule was required to move 5 nm away for a specified period of time. However, in a review of move-on rules for the first meeting of the SPRFMO Scientific Committee in 2013, Hansen *et al* stated that under the New Zealand move-on rule, an area is closed within a 5 nm radius of the start of hauling the gear (the end of the trawl), but only for the vessel that triggered the rule and only for the duration of the remainder of fishing trip by the vessel. On the other hand, under the Australian move-on rule, a 5 nm closure applies to the entire length of the trawl tow or line set and the area is closed to all

⁵⁴ Penny, A. (2013). *Spatial analysis of Australian and New Zealand historical bottom trawl fishing effort in the Convention Area of the SPRFMO* (SPRFMO Doc. SC-01-20), p. 1.

⁵⁵ *Ibid.*

⁵⁶ New Zealand National Report, p. 19.

⁵⁷ Penney, A. J. (2014). *Review of the biodiversity component of the New Zealand Vulnerable Marine Ecosystem Evidence Process* (New Zealand Aquatic Environment and Biodiversity Report No. 135 & SPRFMO Doc. SC-02DW-01). Wellington: New Zealand Ministry for Primary Industries, p. 1.

⁵⁸ New Zealand National Report, p. 19.

vessels fishing under the Australian flag for the remaining duration of the annual fishing permits.⁵⁹

In making changes to open and closed areas in 2015, New Zealand noted that “[o]bservers on board trawlers have recorded substantially more benthic bycatch in boxes 1 and 2, including many species indicative of the presence of VMEs (black corals, gorgonian corals, sponges, etc.).”⁶⁰ New Zealand did not indicate whether the move-on rule had been triggered. The new area open with a move-on rule, box 18 had also reported bycatch of black coral.⁶¹

In the midwater trawl fishery for benthopelagic species, the move-on-rule has never been triggered, but there have been relatively few tows, in fact New Zealand vessels conducted no midwater trawling for benthopelagic species in 2014.⁶² This type of fishing is now considered to be included within the SPRFMO definition of bottom fishing whereas previously New Zealand had allowed it to undertake fishing by this method in closed areas. However, New Zealand does not apply the move-on rule to the ‘heavily fished blocks’, so no triggers from VMEs have ever been reported.

In its 2015 National Report, Australia indicated that the move-on rule had not been triggered in 2014. The VME threshold limits, which trigger Australian move-on protocols, are 50 kg of corals or sponges for trawlers and 10 kg of corals or sponges per 1,000 hooks for longliners. This threshold was not triggered in 2014.⁶³ Australia’s threshold levels are far higher for bottom trawlers than those established by New Zealand for its fleets. New Zealand thresholds use a mixture of number of species (VME biodiversity indicators) and weight (Porifera 50 kg, Scleratinia 30kg, Antipatharia, Alcyonacea and Gorgonacea 1kg, and Hydrozoa 6 kg). Catching more than three species groups or any weight threshold triggers a VME move-on.

SPRFMO has yet to adopt uniform regulations on the threshold levels that would constitute an “encounter” with a VME. CMM 2.03 provides that, until the Scientific Committee has developed advice on SPRFMO threshold levels pursuant to paragraph 5(c) of this CMM, Members are to establish their own threshold levels for encounters with VMEs for vessels flying their flag, taking into account paragraph 68 of the FAO Guidelines.⁶⁴ The Scientific Committee’s Workplan is to continue with the collection of relevant data and the development of models to predict VME indicator taxa,⁶⁵ but progress has been slow.

The current list of VME indicator taxa does not include all the indicators of VME taxa and differs from the list used in the New Zealand EEZ (eg xenophyophores are not currently included). More work needs to go into the list. For instance, ROV dives show that a species could be very rare over most of the dive, then a very dense patch of the species encountered, and

⁵⁹ Hansen, S., Ward, P., & Penney, A. (2013, October). *Identification of vulnerable benthic taxa in the western SPRFMO Convention Area and review of move-on rules for different gear types* (SPRFMO Doc. SC-01-09). Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences, p. 9.

⁶⁰ SC-03-DW-03. New Zealand notification of amendments to the status of blocks within its bottom fishing footprint. Ministry for Primary Industries. 6p.

⁶¹ *Op. cit.* p 5.

⁶² New Zealand National Report, p. 19.

⁶³ Australian National Report, p. 1.

⁶⁴ SPRFMO. (2014, May 4). *CMM 2.03: Conservation and management measure for the management of bottom fishing in the SPRFMO Convention Area*, para. 8(f).

⁶⁵ 2016 SC Workplan.

similarly, if one individual is present, the probability is high that other individuals of that species will be also be present: they simply haven't been identified yet.

Spatial Management

The 2014 and 2015 Scientific Committees recommended that the Commission implement a spatial management approach for bottom fisheries in order to protect VMEs from SAIs, “while enabling viable fisheries to operate”.⁶⁶ The second meeting of the Scientific Committee recommended that spatial management should use open and closed areas, thus rendering the move-one rule unnecessary.⁶⁷ DSCC has repeatedly reminded SPRFMO that spatial management is not a substitute for the move-on rule. Further investigation must be carried out to identify VMEs. Spatial management could be used as a tool to improve on the current conservation measurements in place, and to bring these measures more in line with the UNGA resolutions and FAO Guidelines, but this is not the approach being taken.

For example, the statement by the Scientific Committee in 2015 that “[t]he question of which areas to open and close to fishing would be best re-examined when considering the spatial management approach and the trade-off between environmental protection of VMEs and access by fisheries”⁶⁸ raises the question: what scientific criteria did the Committee have in mind to determine the trade-off of environmental protection of VMEs and access by fisheries? There is no such “trade-off” to prevent SAIs on VMEs envisaged in the UNGA resolutions nor in the FAO Guidelines.

The spatial management approach is clearly spelled out in the UNGA resolutions and the FAO Guidelines:

1. closing areas where VMEs are known or likely to occur on the basis of the best scientific information available unless bottom fisheries in such areas can be (and are) managed to prevent significant adverse impacts (SAIs) on VMEs; and
2. only permitting bottom fishing to take place in an area after conducting a prior impact assessment to determine whether SAIs would occur and any mitigation measures needed, including closures, within the area to ensure that SAIs on VMEs would be prevented.
3. As a complement to these two key requirements, a move-on rule is required to cover those cases where encounters with VMEs occur in spite of the efforts of States and RFMOs to close areas where VMEs are likely to occur and to conduct impact assessments.

It should be noted that the SPRFMO Convention did not implement spatial management in the Convention: despite suggestions by DSCC, IUCN and others for a provision allowing marine protected areas, the relevant article 20.2 provides that the specific conservation and management measures adopted by the Commission shall, as appropriate, include the determination of:

- (c) the nature and extent of fishing for any fishery resource including the establishment of a total allowable catch or total allowable fishing effort;
- (d) the general or specific locations in which fishing may or may not occur;
- (e) the periods in which fishing may or may not occur.

⁶⁶ 2015 SC Meeting, p. 11.

⁶⁷ *Ibid.*

⁶⁸ 2015 SC Meeting, p. 13.

Spatial management, properly implemented, would need to include consultation with stakeholders, a comprehensive strategic environmental assessment as well as environmental impact assessments and, most likely, consulting with other RFMOS, sectoral organizations and regional organizations such as SPREP.

SPRFMO Convention and UNCLOS

The SPRFMO Convention recites 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 minimise the risk of long term or irreversible effects of fishing.” The objective stated in article 2 is: “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.” This makes it clear that marine ecosystems in which fishery resources must be “safeguarded”. This is consistent with UNCLOS which provides in article 192 that “States have the obligation to protect and preserve the marine environment” and accordingly provides in article 193 that “States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.” VMEs and habitat are addressed in article 194.5: “5. The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.”

Article 20.1(d) provides that the conservation and management measures adopted by the Commission shall include measures 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.

Article 10 tasks the Scientific Committee to

2 (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.

Articles 10 and 20 clearly represent an incorporation of the approach of resolution 61/105 and the commitment to avoid significant adverse impacts on VMEs. The mandate in article 20.1(d) to ‘protect’ habitats and marine ecosystems, as well as measures to prevent SAIs on VMEs is a strong one.

The provisions are also an implementation of the UN Fish Stocks Agreement, including its preambular recital that Parties are “Conscious 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 to “apply the precautionary approach in accordance with article 6”.

Conclusion on SPRFMO

The Contracting Parties of SPRFMO, through its interim measures, were amongst the first to adopt multilateral measures consistent with the provisions of resolution 61/105. However, the implementation of these measures by the countries concerned was inconsistent with UNGA resolution 61/105 and the FAO Guidelines as the States concerned did not require assessing the impact of bottom fisheries in areas where they are permitted to occur nor apply the move-on rule to heavily fished areas. The current regulation, CMM 4.03, continues to reflect these shortcomings and inconsistencies with the UNGA resolutions. The objective of CMM 4.03 to promote (rather than ensure) the sustainable management of bottom fisheries, including target fish stocks as well as non-target species taken as bycatch, is inadequate in expression and currently in implementation. This is a key objective established in the UNGA resolutions and the practical actions States are committed to take to meet this objective are spelled out in considerable detail in UNGA resolution 64/72 paragraph 119(d) (such as stock assessments and rebuilding plans). These in turn reflect fundamental and detailed obligations under international law for the management of fisheries established in Articles 5 & 6 of the UN Fish Stocks Agreement (UNFSA).⁶⁹

Specific areas of concern that need to be addressed to bring the work of the Scientific Committee and the regulations adopted by SPRFMO into compliance with the UNGA resolutions include:

- Any areas open to bottom fishing should only be open after an impact assessment has been done and determined that bottom fishing will be managed to prevent SAIs on VMEs in the area covered by the assessment, and conservation measures, including a move-on rule, should apply to all areas open to bottom fishing; this is not currently the case.

Significant Adverse Impacts in the FAO Guidelines

Significant adverse impacts are defined in the FAO Guidelines.

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;

⁶⁹ *United Nations 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*, 4 August 1995, 2167 UNTS 3.

- 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.

19. Temporary impacts are those that are limited in duration and that allow the particular ecosystem to recover over an acceptable time frame. Such time frames should be decided on a case-by-case basis and should be in the order of 5-20 years, taking into account the specific features of the populations and ecosystems.

20. In determining whether an impact is temporary, both the duration and the frequency at which an impact is repeated should be considered. If the interval between the expected disturbance of a habitat is shorter than the recovery time, the impact should be considered more than temporary. In circumstances of limited information, States and RFMO/As should apply the precautionary approach in their determinations regarding the nature and duration of impacts.

There can be no doubt that the Guidelines are aimed at preventing all SAIs on VMEs: the reference to spatial matters is “the spatial extent of the impact relative to the availability of the habitat type affected”, as a factor to determine the scale and significance of the impact.

The Guidelines lay down specific ways that SAIs are to be avoided:

70. States and RFMO/As should, based on the results of assessments carried out pursuant to paragraphs 42 to 53, adopt conservation and management measures to achieve long-term conservation and sustainable use of deep-sea fish stocks, ensure adequate protection and prevent significant adverse impacts on VMEs. These measures should be developed on a case-by-case basis and take into account the distribution ranges of the ecosystems concerned.

71. Conservation and management measures pursuant to paragraph 70, may include:

- i. effort controls and/or catch controls;
- ii. temporal and spatial restrictions or closures;
- iii. changes in gear design and/or deployment or operational measures (as discussed in the 2006 Bangkok Expert Consultation), including:
 - reduction of contact between the fishing gear and the seabed,
 - use of effective bycatch reduction devices, and
 - use of technical measures to eliminate or minimize ghost fishing; or
- iv. other relevant measures necessary to achieve the objective of paragraph 70.

In addition, encounter protocols (the ‘move-on rule’) are to be applied:

67. States and RFMO/As should have an appropriate protocol identified in advance for how fishing vessels in DSFs should respond to encounters in the course of fishing operations with a VME, including defining what constitutes evidence of an encounter. Such protocol should ensure that States require vessels flying their flag to cease DSFs fishing activities at the site and report the encounter, including the location and any available information on the type of ecosystem encountered, to the relevant RFMO/A and flag State.

Conclusion

There can be no doubt that any replacement measure for CMM 4.3 must:

1. Be consistent with articles 10 and 20 as well as the objective of SPRFMO Convention;
2. Implement the UNGA resolutions outlined above, specifically starting with resolution 61/105 and including the latest resolution 71/123; and
3. Be consistent with the FAO Guidelines, based on the full set of criteria in the Guidelines for identifying VMEs, conducting environmental assessments and determining whether significant adverse impacts were likely or not likely to occur as called for in resolution 71/123.

The advice of the SC needs to be assessed against the commitment to take specific actions in the UNGA resolutions and the FAO Guidelines. There is no ‘trade-off’ between protecting the environment and fishing. The UNGA over the last 10 years has committed all high seas fishing nations to take a set out measures to prevent significant adverse impacts (SAIs) on VMEs.⁷⁰ If this is not done, flag States and RFMOs are “not to authorize bottom fishing activities until such measures have been adopted and implemented”.⁷¹ The ‘trade-off’, if it must be called that, has been established by the UNGA: bottom fishing may be authorized to proceed provided it can be managed to prevent significant adverse impacts on VMEs.

The bottom fishing footprint should be redrawn to correspond to areas where bottom fishing has actually occurred during the appropriate reference period and eliminate the large areas within the current footprint which allow bottom fishing to occur in areas that have not previously been impacted. The rationale behind drawing a footprint is to confine bottom to areas already impacted to prevent further damage to new or unimpacted areas.

⁷⁰ For example, the SC stated that: “The question of which areas to open and close to fishing would be best re-examined when considering the spatial management approach and the trade-off between environmental protection of VMEs and access by fisheries”. SC-2 report, page 13. The Commission should be aware that this statement is erroneous and beyond the remit of the SC. It is not a matter of the application of scientific criteria to “trade-off” of environmental protection of VMEs and access by fisheries. There is no such “trade-off” to prevent significant adverse impacts on VMEs envisaged in the UNGA resolutions nor in the FAO Guidelines.

⁷¹ UNGA resolution 64/72 (2009), paragraph 120.

Updated impact assessments need to be carried out, consistent with the FAO Guidelines, for bottom fishing within the footprint, including mapping the distribution of VMEs within the footprint. In this regard the zonation model can be helpful. New Zealand's updated impact assessment is overdue.⁷² Australia's impact assessment was last carried out in 2010. Cumulative impacts need to be considered and included in the impact assessments, as called for in the FAO Guidelines and in UNGA resolutions 66/68 and 71/123, to determine whether VMEs in the footprint areas have been, will be or will continue to be impacted by bottom fishing. In particular, where cumulative impacts of past fishing have caused degradation of VMEs within the footprint, any additional impact on these VMEs should be considered a significant adverse impact and fishing should be prohibited in such areas and in other areas where VMEs need to be closed, unless measures can be put into place to ensure there are no significant adverse impacts on VMEs.

A SPRFMO-wide move-on rule in the SPRFMO area should be established and consistently applied to vessels from all flag States fishing in the region, apply to all areas where vessels are permitted to bottom fish, and require the immediate closure of an area for all vessels where a VME encounter occurs. The taxa encountered and where the rule was triggered must be reported to SPRFMO Secretariat, posted on the SPRFMO website and provided in annual reports. The closure should remain in effect indefinitely unless a subsequent scientific assessment of the area by the SC determines that either VMEs do not occur in the area or SAIs will not occur as a result of reopening the area to one or more methods of bottom fishing. Consistent encounter protocols should be designed and implemented to ensure effective implementation of thresholds and move-on rules, as was called for in resolution 71/123.

⁷² 'New Zealand Bottom Fishing Activities by New Zealand Vessels Fishing in the High Seas in the SPRFMO Area during 2008 and 2009' available at <http://www.fish.govt.nz/NR/rdonlyres/344F062B-5331-481B-ADD7-FBF244566A96/0/NewZealandBottomFisheryImpactAssessmentv11cDec20082small.pdf> carried out an assessment of impact on benthic species for the year 2008-2009, in that report New Zealand set out that it intends to carry out a similar assessment in 2010 when "it will review its implementation of the interim measures in 2010 more fully." Page 4.