

## North Pacific Fisheries Commission

### 1<sup>st</sup> Meeting of the Small Scientific Committee on Vulnerable Marine Ecosystems (VMEs)

14-16 April 2016

Tokyo, Japan

### Final Report

#### Agenda Item 1. Opening of the meeting

1. The 1<sup>st</sup> Meeting of the Small Scientific Committee on Vulnerable Marine Ecosystems (VMEs) took place in Tokyo, Japan and was attended by Members from Canada, China, Japan, Republic of Korea, and the Russian Federation, and a party that has not yet ratified the Convention (USA) and observers.

#### Agenda Item 2. Selection of Chair and Rapporteur

2. Dr. Loh-Lee Low was selected as the Chair. Mr. Peter Flewwelling was selected as Rapporteur with support provided from Japan.

#### Agenda Item 3. Adoption of Agenda

3. The provisional agenda was adopted without amendment.

#### Agenda Item 4. Members' Research Activities on VME

4. Participants made reports with respect to their research activities on VMEs. Japan submitted three documents prior to the meeting (WP01-WP03). Korea (WP05), Russia (WP06), and Canada (Inf02) submitted their documents and presentations on their activities at the meeting. Specific highlights are noted below. Canada also presented a verbal update on ongoing research related to methods for VME identification and assessment of SAIs.
5. NPFC01-2016-SSC-VME01-WP01 (Rev 2) on bycatch and encounter protocols: A summary of Japanese bycatch data and scientific surveys on VMEs on Emperor Seamounts was presented. The document including analyses of six years of bycatch data from 2010-2015, suggested the four orders of VME indicator taxa specified by Convention Text may be reduced to three orders in accordance with the revision of coral taxonomy. These would be Antipatharia, Scleractinia and Alcyonacea (including Gorgonacea). Further, Japan suggested that the move-on distance of 5 nautical miles is disproportionately large compared to the geographical scale of fishing grounds and coral colonies on the Emperor Seamounts.

6. NPFC01-2016-SSC-VME01-WP02 on cold-water corals as indicator taxa in the Emperor Seamounts area was presented by Japan with the results of association analysis on benthic taxa collected by scientific surveys, being that Gorgonacea and Scleractinia frequently co-occur with other benthic animals and therefore their potential as VME indicator taxa in the Emperor Seamounts area is appropriate.
7. NPFC01-2016-SSC-VME01-WP03 survey results on seafloor environment and prey organisms were presented by Japan. The sea floor environment and prey organism survey was conducted by R/V *Kaiyo Maru* of the Fisheries Agency in Kammu Seamount from 22 July to 14 August, 2015.
8. NPFC01-2016-SSC-VME01-WP04: The United States reported on the results of the 2014 underwater camera survey of the eastern Bering Sea slope and outer shelf that was published in <http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-313.pdf>.
9. NPFC01-2016-SSC-VME01-WP05: Republic of Korea reported on coral bycatch of VME indicator taxa by Korean trawl fisheries in the Emperor Seamounts based on the scientific observer data for 2013-2015. With high VME bycatch frequency rate and very low VME indicator weight, there were dominant bycatches of Gorgonacea and Antipatharia while almost no bycatch of Alcyonacea.
10. NPFC01-2016-SSC-VME-WP06: The Russian Federation reported on longline fishing activity in the Emperor Seamounts in 2014 and 2015 and noted that there was almost no occurrence of VME indicating taxa in bycatch.
11. The participants queried why the frequency of bycatches of indicator species were greater in gillnets than trawls; whether there was standardization in methods for weighing samples; and why there were differences in bycatch frequency rates between Japan and Korea noting that fisheries were similar. Further, it was noted that the longline fishery experienced almost no bycatch.
12. It was noted that several factors affected bycatch, including: differences in fishing areas and their topography by gear types, catchability, sea conditions for weighing operations at sea and duration from net hauling to sample weighing and differences in observer protocols.
13. The merit to further analyze the data against other VME criteria other than species association was raised.

## Agenda Item 5. Discussion on VME Encounter Protocols

14. VME Encounter Protocols – Participants recalled that an Intersessional Small Science Working Group (SSWG) was formed in September 2010 to address encounters with corals in the Emperor Seamount fisheries. Five specific tasks were assigned to the SSWG. The SSWG reported to the SWG at its Juneau meeting in August 2012. The “Parties agreed that data deficiencies make it difficult to answer the five questions tasked to the SSWG by the NPFC”.
15. A discussion was made on the changing purposes of encounter protocols in other RFMOs from the original intent as a precautionary measure under data-limited situations to identify and protect VMEs to becoming a safeguard for VMEs in established fishing areas and identifying VMEs in un-fished areas.
16. After discussion the SSC-VME-01 developed the elements of an encounter protocol from existing interim and voluntary measures and identified attributes of these elements that could be considered for future refinement. The list of the identified elements for an encounter protocol is attached as Appendix D.
17. The SSC-VME01 agreed to focus their initial efforts on the four key elements of existing NPFC encounter protocols:
  - a. VME indicator taxa;
  - b. encounter thresholds;
  - c. move-on distance;
  - d. reporting requirements.
18. On the VME indicator taxa, the following wording was considered and endorsed to the Scientific Committee (SC).

NPFC recognizes four orders of corals as indicators of potential VMEs: Alcyonacea, Antipatharia, Gorgonacea, Scleractinia and the potential for addition of new taxa if research so indicates.

19. On the encounter threshold the following was considered for endorsement to the SC:

There are not sufficient scientific data nor compelling reason to change from the 50 kg trigger point at this time. Participants agree that the 50 kg is so high that the threshold would rarely be triggered, however, it is recommended to SC that the 50 kg trigger level remain until SSC VME01 can further analyze existing and future data to enable the Commission to make a more informed decision for change based on statistical analysis of scientific data. There was a proposal that if the 50 kg level were reached in one haul it should result in an immediate temporary closure of the area until further analysis or survey of the area could be conducted. Since there are areas adjacent to the traditional

fishing grounds where dense aggregations of cold-water corals are observed, exceeding the 50 kg threshold would signify the presence of VMEs and continued fishing in the area could constitute SAIs. The number of issues surrounding such a closure: size of area, time of closure, processes for examination of the area, how to re-open need consideration with the advice from the SC. Members discussed the value of analyzing bycatch data as a first step towards potentially refining encounter thresholds that reflect the ecology of the areas fished and gear specific differences in selectivity.

20. On the 'move-on' distance rule there was no agreement on the distance for the 'move-on' rule, however it was generally agreed that 5 nm created significant problems for fishers operating in many areas. The proposal of 2 nm may also create similar hardships in some traditional fishing areas.
21. The SSC-VME-01 did not have sufficient data to determine an exact 'move-on' distance, however, experience has been shown that if we apply the 5 nm rule may require the vessel to move out of the fishing grounds. Moreover, the spatial scale over which benthic communities are structured potentially occupy smaller areas. It is also noted that other RFMOs (NAFO, SEAFO, NEAFC) have encountered similar experiences and have set their move-on rule to 2 nm. SSC-VME-01 proposes that the 'move-on' distance rule for the VME encounter protocol be changed from 5 nm to 2 nm.
22. On the Reporting Requirements point, it was noted that there are already specific and standardized data reporting requirements in the Interim Measures for scientific observers carried on vessels operating in the NPFC Convention Area fishing for bottom species of the Commission.

Agenda Item 6. Review of Current Interim and Voluntary Measures of NPFC for refinement to formal Conservation and Management Measures (CMM)

23. There was a discussion on interim measures that could be made into formal Conservation and Management Measures of NPFC. The SSC-VME-01 could not scrutinize the draft CMM prepared by the Secretary (NPFC01-2016-SSC-NPA01-WP03a) due to lack of time for studying the document, instead Participants discussed about the elements of current interim and voluntary measures related to VMEs. It was noted that some of the issues have already been discussed under Agenda Item 5:
  - a. VME indicator taxa;
  - b. encounter thresholds;
  - c. move-on distance;
  - d. reporting requirements.
24. The SSC did not examine the scientific merits on the following:
  - a. Closure of the area to fishing north of 45 °N latitude under Interim Measures for

the NW Pacific;

- b. the prohibition of fishing below 1500 m;
- c. the closures of C-H Seamount and part of the southeastern slope of Koko Seamount in the Voluntary Measures for NW Pacific.

There would be no change as there was no new data to justify any modification so this will be discussed at SC.

- 25. Under the Interim Measures for the NE Pacific Ocean, it was recommended that interim measures for the NE Pacific Ocean would be updated with minor editorial changes (SWG to SC) and circulated for consideration by SC.
- 26. It was agreed by the Participants that there was no scientific rationale or data to change the Exploratory Fishery Protocol in the North Pacific Ocean at this time within the SSC VME01.

## Agenda Item 7. Recommendations to the 1<sup>st</sup> Session of the Scientific Committee

- 27. The SSC VME01 recommends the following to SC:
  - a. VME taxa – no change, VME indicators remain as Alcyonacea, Antipatharia, Gorgonacea, Scleractinia
  - b. Encounter threshold - no change, the threshold remains at 50 kg per haul.
  - c. Move-on rule – a change from 5 nm to 2 nm.
  - d. Reporting Requirements – no change.
  - e. Voluntary Measures for NW Pacific Ocean – no change
  - f. Interim Measures for the NE Pacific Ocean – refers the Measures to the SC for consideration
  - g. Exploratory Fishery Protocol in the North Pacific Ocean – no change

## Agenda Item 8. Other Matters

- 28. Canada gave an informal presentation on a proposed community modelling approach to map the distributions of benthic communities that have a potential to be associated with VMEs (NPFC01-2016-SSC-VME01-Inf02).
- 29. The FAO ABNJ Deep Sea Project presented an update of the 5-year Project noting that the project has four major areas of work: 1: Strengthening policy and legal frameworks for sustainable fisheries and biodiversity conservation in the ABNJ deep seas; 2: Reducing adverse impacts on VMEs and enhanced conservation and management of components of EBSAs; 3: Improving planning and adaptive management for deep sea fisheries in ABNJ; and 4: Development and testing of methods for area-based planning. The ABNJ Deep Seas project brings together a range of partners working on deep-sea fisheries and conservation issues in the ABNJ globally.

30. The FAO also demonstrated the VME Portal and Data Base. The VME Portal provides general information on VMEs, including sections for relevant publications and international instruments, links to VME-related tools and terminology, and the VME Data Base containing information on VME-related measures in ABNJ for each regional fisheries body. The database and website serve as an information sharing platform as well as an awareness building tool ([www.fao.org/in-action/vulnerable-marine-ecosystems/en/](http://www.fao.org/in-action/vulnerable-marine-ecosystems/en/)).

31. The FAO representative encouraged NPFC to engage in the efforts of the FAO ABNJ.

#### Agenda Item 9. Next Meeting

32. The next meeting of the SSC VME shall be deferred to SC.

#### Agenda Item 10. Adoption of the Report

33. The record of the 1<sup>st</sup> Meeting of the SSC VME was adopted by consensus.

#### Agenda Item 11. Close of the Meeting

34. The SSC VME meeting was closed at 1650 hrs 16 April 2016.

35. The Participants thanked the Chair for his leadership in guiding us at this meeting.

#### **Annexes:**

Annex A - Agenda

Annex B – Annotated Agenda

Annex C - Participants List

Annex D – NPFC Encounter Protocols

**North Pacific Fisheries Commission**  
**1<sup>st</sup> Meeting of the Small Scientific Committee on Vulnerable Marine**  
**Ecosystems (VMEs)**

14-16 April 2016

Tokyo, Japan

**Agenda**

1. Opening of the meeting
2. Selection of Chair and Rapporteur
3. Adoption of Agenda
4. Member's research activities on VME
5. Discussion on VME Encounter Protocols
6. Review of Current Interim and Voluntary Measures of NPFC for refinement to formal Conservation and Management Measures (CMM)
7. Recommendations to 1<sup>st</sup> Session of the Scientific Committee
8. Other Matters
  - UN ABNJ Deep Seas Project, FAO VME database
9. Next meeting
10. Adoption of the Report
11. Close of the Meeting

**North Pacific Fisheries Commission**  
**1<sup>st</sup> Meeting of the Small Scientific Committee on Vulnerable Marine Ecosystems (VMEs)**

14-16 April 2016

Tokyo, Japan

**Annotated Agenda**

Agenda Item 1. Opening of Meeting

*The meeting will open at 0900 hrs on 14 April 2016. Past Chair shall provide admin details for the meeting (start times, breaks, facilities available – washrooms secretariat, etc.)*

Agenda Item 2. Selection of Chair and Rapporteur

*Participants will consider to select Chair and Rapporteur for the Meeting and future meetings according to the Rules of Procedure.*

Agenda Item 3. Adoption of Agenda

*The provisional agenda will be reviewed, amended where appropriate, and adopted.*

Agenda Item 4. Member's research activities on VME

*Participants will be invited to present their research activities on VME.*

Agenda Item 5. Discussion on VME Encounter Protocols

*Participants will be invited to discuss the progress of developing VME encounter protocols and make recommendations to the SC*

Agenda Item 6. Review of Current Interim and Voluntary Measures of NPFC for refinement to formal Conservation and Management Measures (CMM)

*Participants will review current interim and voluntary measures for VME to refine with the aim of submitting a formal recommendation for conservation and management measures for consideration by the Scientific Committee and the Commission. The intent*



*is to have the CMM approved before the UN Deep Sea Fisheries Review scheduled in November 2016.*

Agenda Item 7. Recommendations to 1<sup>st</sup> Session of the Scientific Committee

*Participants will agree on recommendations to be submitted to 1<sup>st</sup> session of the Scientific Committee for its consideration.*

Agenda Item 8. Other Matters

- UN ABNJ Deep Seas Project, FAO VME database

*FAO will brief the UN ABNJ Deep Seas Project and FAO VME database. Participants will also consider any other issues that are raised under agenda item 3.*

Agenda Item 9. Next meeting

*Participants will decide the date and place of the next meeting.*

Agenda Item 10. Adoption of the Report

*The record of the 1<sup>st</sup> SSC on VME will be adopted.*

Agenda Item 11. Close of Meeting

*The meeting will close at 1800 hrs on 16 April 2016.*

**NORTH PACIFIC FISHERIES COMMISSION  
SMALL SCIENTIFIC COMMITTEE – VULNERABLE MARINE  
ECOSYSTEMS MEETING  
14-16 April 2016**

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## **LIST OF THE IDENTIFIED ELEMENTS FOR AN ENCOUNTER PROTOCOL**

SSC VME Meeting  
14 April 2016

### **1. The purpose of this document is three-fold:**

- Summarize and describe the key elements of encounter protocols that are presently included as part of NPFC's interim and voluntary measures, and proposed for formal conservation and management measures (CMM);
- Identify other elements of encounter protocols that merit further analysis and discussion to improve the effectiveness of encounter protocols;
- To document and evaluate progress toward early identification of potential VMEs and effective responses that lead to conservation and management of confirmed VMEs.

### **2. Guiding principles for design and application of encounter protocols in NPFC Convention Area**

- encounter protocols should be designed to address specific NPFC objectives;
- encounter protocols should reflect the scale and type of fishing activity that produced the potential encounter;
- encounter protocols should consider the cumulative effect of encounters by different vessels or fleets over time.

### **3. Purposes of NPFC encounter protocols**

The purposes of encounter protocols in NPFC Convention Area include:

- Ensuring early detection and protection of potential VMEs within an existing fishing area;
- Ensuring early detection and protection of potential VME within an unfished area;
- Documenting information on known occurrences of VME indicators within the Convention Area.

### **4. Elements of existing NPFC encounter protocols**

Elements of encounter protocols that are presently included within interim measures

and draft CMM include for existing fishing grounds:

VME indicator taxa:

NPFC recognizes four orders of corals as indicators of potential VMEs: Alcyonacea, Antipatharia, Gorgonacea, Scleractinia.

Encounter thresholds:

- In NW Pacific Ocean, Republic of Korea and Japan voluntarily cease fishing and move to a new location when more than 50 kg of live cold water corals are encountered in one haul.

Move-on distance:

In NW Pacific Ocean, when the encounter threshold is exceeded in one haul, NPFC requires the vessel to cease fishing and move a minimum of 5 nm from the encounter.

Reporting requirements:

Following an encounter that exceeds 50 kg in one haul, the location and the taxa in question, shall be reported to the Secretariat, who shall notify the other members of the Commission so that appropriate measures can be adopted in respect of the relevant site.

There are no specific elements of an encounter protocol for areas subject to exploratory fishing in the draft CMM, but the Exploratory fishery protocol requires that a mitigation plan be developed to prevent SAIs to VMEs that may be encountered during the fishery.

**5. Other elements of encounter protocols needed to improve implementation and effectiveness**

- Guidance on the direction to move (e.g. up/down slope; along depth contour);
- What action to take following moving-on, in terms of:
  - Process by which data are used to trigger a response;
  - Timing and duration of any closure;
  - Area of closure (including shape);
  - Evidence needed to confirm presence or absence of VME in area;



- When an area could be re-opened (e.g. confirming absence of VME in the area);
- The establishment and use of a database of encounters.

**6. Research and analyses recommended to further refine encounter protocols**

- Merits of considering other taxa (e.g. structure-forming sponges), topographical, geographical and geological features specified by FAO DSF Guidelines (e.g. seeps, hydrothermal vents, canyons), as in other RFMOs;
- Merits of taxon-specific encounter thresholds and reporting (e.g. at order level);
- Merits of framework for evaluating the effectiveness of encounter protocols;
- Merits of tiered approach with different encounter protocols associated with different thresholds (e.g. CCAMLR, smaller threshold would indicator risk of VME and trigger reporting requirements, larger threshold would trigger reporting requirements and closure);
- Merits of gear-specific thresholds to reflect differences in catchability;
- Merits of gear-specific move-on distances to reflect type of gear;
- Different reporting requirements for different catches;
- Merits of tiered approach to reporting bycatch of VME indicator taxa;
- Merits of different encounter protocols for existing and new fishing areas.