



North Pacific Fisheries Commission

NPFC-2018-SSC VME03-Final Report

**3rd Meeting of the Small Scientific Committee
on Vulnerable Marine Ecosystems
REPORT**

9-10 April 2018

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North Pacific Fisheries Commission
3rd Meeting of the Small Scientific Committee on Vulnerable Marine
Ecosystems

9-10 April 2018
Tokyo, Japan

REPORT

Agenda Item 1. Opening of the meeting

1. The 3rd Meeting of the Small Scientific Committee on Vulnerable Marine Ecosystems (SSC VME) took place in Tokyo, Japan on 9-10 April 2018, and was attended by Members from Canada, China, Japan, the Republic of Korea, and the Russian Federation. The Deep Sea Conservation Coalition (DSCC) attended as an observer. The meeting was opened by Ms. Bai Li (China) who served as the SSC VME Chair.

Agenda Item 2. Adoption of Agenda

2. The agenda was adopted without revision.

Agenda Item 3. Meeting arrangements

3. Science Manager Dr. Aleksandr Zavolokin outlined the meeting arrangements.

Agenda Item 4. Member's research activities on VMEs

4. Japan reported on its scientific survey on the bottom environment in the southern Emperor Seamounts (NPFC-2018-SSC VME03-WP01). From 11 July to 9 August 2017, Japan conducted drop-camera surveys at 18 stations in the C-H Seamount, ranging from 347 m to 1,235 m in depth. The results were compared to those of Japanese surveys conducted at similar stations in 2010-2012 and 2016. Fish, including main target species such as North Pacific armorhead and oxeye oreo, were observed at almost all stations, and changes in species composition and an increase in the occurrence of benthos were confirmed on the sea floor. A change in the bottom environment was thus observed.
5. Russia suggested that the accuracy of species identification could be improved through sampling. Japan acknowledged the difficulty of accurately identifying species through camera and video footage alone.

6. Russia reported on identification of VMEs and assessment of the impact by bottom fishing activities on VMEs and marine species (NPFC-2018-SSC VME03-WP03). Russia has historically conducted bottom trawl fishing, bottom gillnet fishing, bottom longline fishing and pot fishing in the Emperor Seamounts. Russia complies with CMM 2017-05 when conducting bottom fishing activities in the Emperor Seamounts, and has not observed any evidence of SAIs on VMEs in the activities conducted to date.
7. Korea presented research conducted by Korea and the United States on primnoidae in the Emperor Seamounts (NPFC-2018-SSC VME03-IP01). Coral specimens were collected by observers on Korean trawl vessels and analyzed. Six primnoid species, including two new species, were identified.
8. Canada presented an overview of its research activities on VMEs, particularly research conducted on Cobb Seamount (NPFC-2018-SSC VME03-IP03).

Agenda Item 5. Review of outputs and recommendations from the NPFC/FAO VME workshop

9. The Co-Chair of the NPFC/FAO VME workshop, Dr. Masashi Kiyota, summarized the outputs of the workshop and presented recommendations for the consideration of the SSC VME (NPFC-2018-WS VME01-Final Report; NPFC-2018-SSC VME03-IP02).
10. The SSC VME reviewed and refined the recommendations submitted by the NPFC/FAO VME workshop, including determining the level of priority of each recommendation, as detailed in Annex D. The participants agreed to review the recommendations from the workshop again in the future.

Agenda Item 6. Review of the CMMs 2017-05 and 2017-06 for bottom fisheries and protection of vulnerable marine ecosystems

11. The participants reviewed CMMs 2017-05 and 2017-06 and determined that it is not necessary to revise them at this point in time.

Agenda Item 7. Scientific projects

7.1 Ongoing projects

7.1.1 Spatial management of VMEs and bottom fisheries

12. The Data Coordinator, Mr. Mervin Ogawa, reported on discussions with the Secretariat of the Commission for the Conservation of Antarctic Marine Living Resources on the development and management of the spatial database (NPFC-2018-SSC VME03-WP02).

13. The participants agreed to establish an informal small working group (Canada, China, Japan, Korea, Russia) that will work intersessionally to provide suggestions to the Data Coordinator for spatial management project.

7.1.2 VME identification guide

14. Korea reported on the progress in the development of the NPFC VME identification guide.
15. Canada, Japan and Korea drafted a list of tasks for the development of the NPFC VME identification guide, for inclusion in the 2017-2021 Work Plan.
16. The participants agreed to establish an informal small working group (Canada, China, Japan, Korea, Russia) that will work intersessionally to develop a VME identification guide.

7.2 New projects

17. The participants discussed potential new projects and proposed holding a face-to-face meeting to discuss data requirements and data sharing for combined SAI assessment and other VME-related tasks.

Agenda Item 8. Review/update of the 2017-2021 Work Plan

18. The participants reviewed the 2017-2021 Work Plan and updated it as detailed in NPFC-2018-SC03-WP07.

Agenda Item 9. Other matters

9.1 Liaison with other organizations

19. The Chair reported on her attendance of a climate change and fisheries workshop co-organized by the Food and Agriculture Organization of the United Nations (FAO) and the Deep Ocean Stewardship Initiative (DOSI). Research highlights from the workshop include studies of the various impacts of climate change on the deep ocean, the application of habitat suitability models, and exposure to climate change hazards. The Chair emphasized that liaison with other organizations could provide future research ideas for the NPFC, and encouraged Members to attend conferences hosted by other organizations.

9.2 Other issues

20. No other issues were discussed.

Agenda Item 10. Recommendations to the Scientific Committee

21. The SSC VME recommends the following to the SC:

- a. Endorse the recommendations from the NPFC/FAO VME Workshop as revised by the SSC VME in Annex D, and adopt the following recommendations (b. - n.) as high priority tasks for the SSC VME. Tasks identified as second priorities will be updated annually as part of the Work Plan.

Data

- b. Review data availability against data requirements from the FAO DSF Guidelines (NPFC-2018-WS VME01-WP20), clarify data deficiencies and prioritize actions to fill data gaps.
- c. Continue development of the regional observer program.
- d. Consolidate all available data and potentially relevant information from inside and outside the Convention Area to map VMEs (such as bycatch, scientific surveys and ecological models, fisheries independent surveys, historical literature, data from fishing industry itself, coral drag fishing).
- e. Continue work on the identification guides for VME indicators, data sharing protocols, and central data repository for the NPFC.

Encounter Protocol

- f. Post-encounter requirements – Prepare a quick reporting protocol to avoid multiple impacts on the same VME site, and consider a process to introduce provisional area-protection around the encounter location, for example, a box with a set distance around the tow path.

SAI Assessments

- g. Assess SAI by bottom fisheries on any other relevant VME indicator taxa, in addition to the four existing taxa (for example sponges and hydrocorals) and choose taxonomic resolution for VME indicators.
- h. Develop measurable objectives for determining the occurrence of SAI and a standardized approach and metrics to assess the cumulative impact of all Members' bottom fisheries on VMEs through time.

Fishing Footprints

- i. Map a combined fishing footprint and effort to better identify fishing grounds using data from all NPFC Members by gear type and time.
- j. Determine the appropriate scale for collecting and identifying fishing locations to define the fishing footprint in relation to assessing SAI.

Exploratory Fishing Protocol

- k. Consider the following points with respect to avoiding SAIs to VMEs in the course of exploratory fishing:
 - i. Review available scientific information (such as distribution models) and conduct reconnaissance for VME in the area to be explored, through fishery-independent surveys,

drop-camera deployments from fishing vessels or other low impact sampling prior to fishing, beyond the requirements currently contained in the NPFC regulations.

ii. Initial exploratory fishing trips should be short to allow for timely assessment of both VME and fishery but at the same time minimizing any SAI.

Spatial Management Measures

1. Develop management objectives and appropriate measures to protect recovering VME sites.

Other

- m. Assess the recovery of VME sites and monitor the recovery process.
- n. Introduce periodic internal review processes for VME management.
- o. Endorse the updated 2017-2021 SSC VME Work Plan (NPFC-2018-SC03-WP07) which summarizes the recommendations above.
- p. Endorse the updated list of projects from the SSC VME as detailed in NPFC-2018-SC03-WP08.
- q. Maintain the wording of the VME-related sections of CMM 2017-05 and CMM 2017-06.

Agenda Item 11. Next meeting

22. The SSC VME requests the guidance of the SC for determining the date and location of the next meeting.

Agenda Item 12. Adoption of the Report

23. The SSC VME03 Report was adopted by consensus.

Agenda Item 13. Close of the Meeting

24. The SSC VME03 closed at 17:16 on 10 April 2018.

Annexes

Annex A – Agenda

Annex B – List of Documents

Annex C – Participants List

Annex D – Prioritized list of recommendations from the NPFC/FAO VME workshop

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LIST OF DOCUMENTS**MEETING INFORMATION PAPERS**

Number	Title
NPFC-2018-SC03-MIP01 (Rev 2)	Meeting Information
NPFC-2018-SSC VME03-MIP02	Provisional Agenda
NPFC-2018-SSC VME03-MIP03	Provisional Annotated Agenda
NPFC-2018-SSC VME03-MIP04	Indicative Schedule

REFERENCE DOCUMENTS

Symbol	Title
https://www.npfc.int/cmm-bottom-fisheries-and-protection-vmes-nw-pacific-ocean-click-link	CMM 2017-05 For Bottom Fisheries and Protection of VMEs in the NW Pacific Ocean
https://www.npfc.int/cmm-bottom-fisheries-and-protection-vmes-ne-pacific-ocean-click-link	CMM 2017-06 For Bottom Fisheries and Protection of VMEs in the NE Pacific Ocean

WORKING PAPERS

Symbol	Title
NPFC-2018-SSC VME03-WP01	Report of the scientific survey on bottom environment in the southern Emperor Seamounts (southern-ES) in 2017
NPFC-2018-SSC VME03-WP02	Spatial management of VMEs and bottom fisheries
NPFC-2018-SSC VME03-WP03	Report of the Russian Federation on identification of VMEs and assessment of impact by bottom fishing activities on VMEs and marine species

INFORMATION PAPERS

Symbol	Title
NPFC-2018-SSC VME03-IP01	Primnoidae (Octocorallia: Calcaxonia) from the Emperor Seamounts, with Notes on Callogorgia elegans (Gray, 1870)
NPFC-2018-SSC VME03-IP02	The Global Picture - Discussions on Comparisons of the NPFC Approach with That of Other Regions: summary
NPFC-2018-SSC VME03-IP03	Canadian research activities on VMEs

REPORTS FROM WORKING GROUPS AND SSCs

Symbol	Title
NPFC-2018-WS VME01-Final Report	Report of the NPFC/FAO Workshop

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Prioritized list of recommendations from the NPFC/FAO VME workshop

#	Recommendation	Priority	
		High	Second
	Data		
1	Review data availability against data requirements from the FAO DSF Guidelines (NPFC-2018-WS VME01-WP20), clarify data deficiencies and prioritize actions to fill data gaps	v	
2	Continue development of the regional observer program	v	
3	Consolidate all available data including bycatch, scientific surveys, fisheries independent surveys, historical literature, from fishing industry itself (e.g., bathymetric data), and potentially relevant information, to map VMEs and get more detailed information about interactions between VMEs and bottom fisheries, including coral drag fishing	v	
4	Continue work on the ID guides for VME indicators; data sharing protocols; and central data repository for the NPFC and ensure data security	v	
5	Cooperate with TCC in getting information on vessel positions to develop scientific advice on fine scale spatial management in the Emperor Seamount area		v
6	Consider conducting standardized training programs for observers with support from FAO		v
7	Collect and make use of additional data relevant to protection of VMEs including data on potential impacts of climate change and lost fishing gear		v
	Encounter Protocol		
8	Post-encounter requirements – Prepare a quick reporting protocol to avoid multiple impacts on the same VME site, and consider a process to introduce provisional area-protection around the encounter location, for example, a box with a set distance around the tow path	v	
9	VME indicator taxa – Develop area-specific indicators with regional characteristics of benthic fauna taken into account, and choose proper taxonomic resolution that will represent the ecological function of the indicator groups taking the balance of practicality and scientific validity		v
10	Encounter threshold – Refine the current thresholds on the basis of scientific information including bycatch levels and catchability estimates, and use taxon-specific and gear-specific thresholds		v
11	Move-on rule – Albeit the change from 5 nm to 2 nm appears reasonable, consider refining the move-on distance in relation to the size and distribution of observed VME patches, as well as the size of fishable seamounts		v
	SAI Assessments		
12	Assess SAI by bottom fisheries on any other relevant VME indicator taxa, in addition to the four existing taxa, for example sponges and hydrocorals where they are found in the Convention Area	v	
13	Develop a standardized approach and metrics to assess the cumulative impact of all Members' bottom fisheries on VMEs through time	v	
14	Develop measurable objectives for determining the occurrence of SAI	v	

	Fishing Footprints		
15	Map a combined fishing footprint and effort to better identify fishing grounds using data from all NPFC Members by gear type and time	v	
16	Determine the appropriate scale for collecting and identifying fishing locations to define the fishing footprint in relation to assessing SAI	v	
17	Consider methods for accessing electronic data from the fishing vessels operating in the NPFC and from any research vessels, and encourage Members to deploy electronic reporting systems whenever possible including data on position and catch		v
18	Provide descriptions of the current and historical fishing gears operating in the NPFC		v
	Exploratory Fishing Protocol		
19	Consider the following points with respect to avoiding SAIs to VMEs in the course of exploratory fishing	v	
	i. Conduct reconnaissance for VME in the area to be explored, through fishery-independent surveys, drop-camera deployments from fishing vessels or other low impact sampling prior to fishing, beyond the requirements currently contained in the NPFC regulations	v	
	ii. Initial exploratory fishing trips should be short to allow for timely assessment of both VME and fishery but at the same time minimizing any SAI	v	
	iii. Consider banning exploratory fishing in VME closed areas		v
20	Clarify the role of observers in collecting and reporting data during exploratory fishing		v
21	Review the application of the exploratory fishery measure to learn from others' experiences in implementing their exploratory fisheries measures		v
	Spatial Management Measures		
22	Develop management objectives and appropriate measures to protect recovering VME sites	v	
23	Assess management needs and decide on objectives that are aligned with the UNGA resolutions and NPFC convention		v
24	Use spatial mitigation measures that could include gear-specific closures, full-seamount closures, and within-seamount closures (on large seamounts with fine-scale spatial information and if practically possible)		v
25	Develop habitat suitability models and use them with decision-support tools to aid a formal spatial management planning process, as used in SPRFMO		v
26	Introduce periodic review process (enables flexibility to change needs and objectives of spatial management, as well as availability of new data to re-test results of analysis and decisions on which they are based)		v
	Other		
27	Assess the recovery of VME sites and monitor the recovery process	v	
	General		
28	Introduce periodic internal review processes for VME management	v	
29	Consider external reviews to audit RFMO performance on VME protection		v
30	Conduct annual pre-reporting of research plans between Members to facilitate collaboration		v
31	Seek cooperation with other organizations which have related missions		v