



North Pacific Fisheries Commission

**Actions taken by the North Pacific Fisheries Commission (NPFC)
in response to paragraphs of UNGA resolutions relating to the impacts of
bottom fishing on vulnerable marine ecosystems and the long-term
sustainability of deep-sea fish stocks**

Submitted by NPFC Secretariat

Introduction

The North Pacific Fisheries Commission (NPFC) is an inter-governmental organization established by the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean following the UNGA Resolutions 61/105 and 64/72 relevant to the development of a new RFMO competent to regulate bottom fisheries in the North Pacific Ocean. The Convention entered into force on 19 July 2015 and its primary objective is to ensure the long-term conservation and sustainable use of fisheries resources in the Convention Area while protecting the marine ecosystems of the North Pacific Ocean in which these resources occur. The Convention applies to the waters of the high seas area of the North Pacific Ocean excluding the Bering Sea and other high seas areas that are surrounded by the exclusive economic zone of a single state. Current Members are Canada, China, Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America, and the Republic of Vanuatu. The Republic of Panama is a Cooperating Non-Contracting Party.

The Secretariat of the NPFC hereby provides information on the actions taken in response to the requested paragraphs of 113, 117 and 119 to 124 of UNGA resolution 64/72, paragraphs 121, 126, 129, 130 and 132 to 134 of UNGA resolution 66/68 and paragraphs 156, 171, 175, 177 to 188 and 219 of UNGA resolution 71/123, for the implementation of the provisions of UNGA resolutions relating to the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, which are summarized as below.

Activities taken by NPFC

Interim Period, 2006-2015 before the Convention entered into force

As one of the deep-sea RFMOs, NPFC has taken measures to sustainably manage fish stocks and protect vulnerable marine ecosystems (VMEs) from bottom fisheries even before the Convention entered into force. Fisheries resources covered by the Convention include all fish, mollusks, crustaceans and other marine species with some exceptions. Fishery for bottom fish stocks in the Northwestern Pacific Ocean, includes bottom trawl fisheries, bottom gillnet fisheries, and bottom longline fisheries which have been conducted over the Emperor Seamounts by Japan, Korea, and

Russia. The primary target species of the bottom trawl fisheries have been North Pacific armorhead (*Pentaceros wheeleri*) and splendid alfonsino (*Beryx splendens*), and the primary target species of the bottom gillnet fisheries have been splendid alfonsino, oreo (*Allocyttus verrucosus*), and mirror dory (*Zenopsis nebulosa*). The target species of the bottom longline fisheries were rockfish (*Helicolenus* spp) in 2001-2016 and skilfish (*Erilepis zonifer*) in 2014-2018. In the Northeastern Pacific Ocean, the seamount longline fishery began in the 1970's. Four seamount aggregations (*Eickelberg Seamounts*, *Warwick Seamount*, *Cobb Seamounts*, and *Brown Bear Seamounts*) have been fished by Canada, via longline hook and longline trap gear. Since the inception of the fishery, the target species of both the longline hook and longline trap harvesters has been sablefish (*Anoplopoma fimbria*).

During the negotiation period from 2006 to 2015, the participating Members adopted interim and voluntary conservation and management measures for the bottom fisheries and protection of VMEs in the Northwest Pacific in 2007 and Northeast Pacific in 2011. These interim measures included; limit of fishing effort to existing levels in terms of number of vessels and fishing impacts, no fishing on seamounts north of 45°N, on C-H and southern part of Koko Emperor Seamounts and deeper than 1500 m. The measures specified no direct fishing on four taxa of cold-water corals - Alcyonacea, Antipatharia, Gorgonacea, and Scleractinia - as well as any other VME indicator species, moving more than 5 miles in case of encounter and over the threshold (50 kg) of VME indicator species, no expansion of fisheries into new areas unless expansion adheres to Exploratory Fishing Protocols to ensure that fishing does not have significant and adverse impacts (SAI) on VME. The measures set standards for collection and sharing of data, required all vessels to have operational vessel monitoring systems, and set guidelines for the use of observer data. Besides the interim measures described above, some Members introduced voluntary measures at their own capacity to supplement the interim measures.

After the Convention entered into force, from 2015 to the present

In order to achieve the objectives of the Convention, NPFC established the Commission and its subsidiary bodies in accordance with the Convention. The Commission formed by all its Members is supported by three subsidiary bodies: Scientific Committee (SC), Technical and Compliance Committee (TCC) and Finance and Administration Committee (FAC). Each of these subsidiary bodies has its own specialist technical supporting groups and there is the Small Scientific Committee on Bottom Fish and Marine Ecosystems (SSC BF-ME) to assist for the SC to provide scientific advice on the management of bottom fisheries and protection of VMEs to the Commission.

The interim measures taken before the Convention entered into force became formal Conservation and Management Measures (CMMs) of NPFC by adoption in 2016 and updated thereafter by Members at official meetings held annually based on best scientific information available.

- (CMM 2016-05 in 2016; CMM 2017-05 in 2017; CMM 2018-05 in 2018) CMM 2019-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean
- (CMM 2016-06 in 2016; CMM 2017-06 in 2017) CMM 2019-06 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northeastern Pacific Ocean

These CMMs are consistent with relevant international instruments including UNCLOS and International Guidelines for the Management of Deep-sea Fisheries in the High Seas, and address mandatory measures for Members to take in order to achieve sustainable management of bottom fish stocks and protection of VMEs.

Specific Measures for Sustainable management of bottom fish stocks and non-target species

To regulate bottom fisheries operated in the Convention Area, NPFC has taken a precautionary measure to limit the number of bottom fishing vessels to existing levels, consequently only a few vessels for bottom fisheries are active targeting bottom fish stocks. Additional measures introduced since the entry into force of the Convention were; 100% scientific observer coverage for the fishing vessels; bottom fisheries closure from November to December; and requirement that the distance between gill net and sea floor is greater than 70 cm. The SC has developed a 5-year Research Plan for 2017-2021 to provide scientific advice and recommendations to the Commission, which outlines priority research themes, including the rationale and specific areas of work, stock assessment for target species and bycatch species, ecosystem approach to fisheries, vulnerable marine ecosystems, and data collection, management and security. Stock assessments for target species have the highest priority among the research areas since accurate stock assessments are critical to ensure the long-term conservation and sustainable use of fisheries resources in the Convention Area. The highest priority belongs now to the species with decreasing catches such as North Pacific armorhead and splendid alfonsino, major target species for bottom fisheries in the North Pacific. However, due to the unique characteristics of the North Pacific armorhead such as life history and its sporadic recruitment cycle, it is difficult to apply conventional stock assessment methods. Therefore, NPFC has developed an Adaptive Management scheme for this species through the collaboration of scientists, managers, and fishers, which is now being implemented by conducting monitoring surveys by Members for the detection of strong recruitment of North Pacific armorhead during March through June in 2019 and 2020. Following this scheme, in years when strong recruitment of North Pacific armorhead is not detected, Members are encouraged to limit their annual catch to the levels as addressed in the CMM. During a year when high recruitment is detected, bottom fishing with trawl gear shall be prohibited in specific areas in the Emperor seamounts where half of the catch occurred in 2010 and 2012. An additional measure on the use of trawl nets with minimum mesh size at 130 mm was put in place to reduce fishing pressure on immature splendid alfonsino.

Specific Measure for protection of VMEs

Following measures for the protection of VMEs have been in place;

- Prohibition of expansion of bottom fisheries into the western part of the Convention area where no such fishing is currently occurring by limiting bottom fisheries to seamounts located south of 45 degrees North latitude and closing fisheries in areas deeper than 1500 m.
- Closure of fisheries in C-H seamount and Southeastern part of Koko seamount areas.
- No direct fishing on four taxa of cold-water corals.

To support the implementation of CMMs, the SC has developed a 5-year Research Plan for 2017-2021 to address VME issues, which includes the review of the encounter protocol and the exploratory fishery protocol, development of ID guides for VME indicators and a bycatch list, development of an NPFC VME map, assessment of significant adverse impact (SAI) on VMEs indicator species, and review of VME related data availability. The NPFC has developed the elements of an encounter protocol from existing interim and voluntary measures to safeguard VMEs. The key elements of the existing NPFC encounter protocols are: a. a definition of VME indicator taxa; b. a definition of encounter thresholds; c. implementation of a move-on distance; and d. requirements to report encounters.

For the VME indicator taxa definition, NPFC has reviewed this topic annually with consideration of new information and data based on the research conducted by Members. The revision of the list of VME indicator taxa will be determined based on assessment and research conducted by Members. To assist observers and fishers on-board in identifying VMEs encountered during fishing operations, NPFC is developing a VME taxa identification field guide for coral identification. There has been active collaboration between Members on this task and a standard field guide has been drafted and will be completed during 2020 after review by the SC. According to the encounter protocols in the CMMs, Members of the Commission shall require vessels flying their flag to cease bottom fishing activities in areas where, in the course of fishing operations, cold water corals more than 50 kg are encountered in one gear retrieval. In such cases, the vessel shall not resume fishing activities until it has relocated a sufficient distance, so that additional encounters with VMEs are unlikely. Members agreed to maintain the current wording of the CMMs related to the encounter protocol but acknowledged that, in the long term, it could be further refined.

The SC plans to address the following subjects to further refine encounter protocols in the Convention Area;

- Review of taxa, topographical, geographical and geological features that may indicate the presence of VMEs;
- Taxon-specific encounter thresholds and reporting;
- A framework for evaluating the effectiveness of encounter protocols;
- A tiered approach with different encounter protocols associated with different thresholds;
- Gear-specific thresholds to reflect differences in catchability;

- Gear-specific move-on distances to reflect type of gear;
- Different reporting requirements for different catches;
- A tiered approach to reporting bycatch of VME indicator taxa;
- Different encounter protocols for existing and new fishing areas.

Impact assessments

In accordance with the CMMs for Bottom Fisheries and Protection of VMEs in the Northwest Pacific and Northeast Pacific, NPFC Members are to conduct impact assessments on a regular basis for existing fisheries. The purpose of the impact assessments is to determine that existing fisheries or exploratory fisheries do not have SAIs on VMEs. The first impact assessment was conducted by Japan, Korea, Russia and the USA for the Northwest Pacific region in 2008. The reports by the four Members expressed that their fisheries did not have any SAIs on corals in the region. The USA is not currently prosecuting bottom fisheries in the Convention Area. For the Northeast Pacific region, Canada conducted its impact assessment in 2013 and reported that its small longline fishery did not have SAIs on corals in the Northeast Pacific. All reports noted that the areas of seamount fishing were a small fraction of all seamounts in the Convention Area and that fishing had been small scale, thus limiting any severe impacts. While VMEs had not yet been clearly identified in the Convention Area, NPFC recognized that corals need special attention.

Members have recently updated their impact assessments. Recent impact report from Canada submitted to NPFC/FAO VME Workshop in 2018 indicated that there was no conservation concern for the target sablefish species. No analysis of SAIs on corals and sponges was made but there was caution expressed that SAIs on the VMEs may occur. The Canadian report suggested that there should be measurable objectives of SAIs for VME protection. Japan has updated the assessment of the impacts of Japanese commercial bottom fisheries on VMEs and other marine species in the western part of the NPFC Convention Area in 2018 based on the scientific knowledge from previous Japanese surveys, analyses and reports. Fine-scale analysis on spatial distribution of trawl and bottom gillnet fishing activities within the fished seamounts revealed that the density of potential VME indicator taxa were generally low, and no potential VME sites were detected in the existing fishing grounds of the fished seamounts. It would be possible to avoid SAIs on fished seamounts through the spatial protection of the identified VMEs and the improvement of encounter protocols for preventing unanticipated fisheries interactions with VMEs. Korea has updated its impact assessment in 2018 based on the analysis of logbook and scientific observer data from Korean trawlers which demonstrated that Korean trawl fishery continues to be minimal and the catch weights of VME indicator taxa remained much lower than the current encounter threshold (50 kg). An impact assessment is also required for Members to conduct new or exploratory fisheries in the areas closed for VME conservation as specified by the exploratory fishery protocol. The exploratory fisheries are to be permitted only where the assessment concludes that they would not have SAIs on marine species or any VMEs and on the basis of comments and recommendations of SC.

Other elements for research and implementation

While scientific research are conducted by Members in accordance with the SC research plan, it is suggested that more research needs to be done for enhancement of the current NPFC measures to avoid SAIs on VMEs. At a recent NPFC/FAO VME Workshop held in 2018, participants suggested research that may include site reconnaissance, identifying habitat characteristics, and habitat suitability modeling to determine the extent of VME habitats that cannot yet be surveyed. Another area of research to be conducted urgently is to address the impacts of climate change on the distribution of fish and fisheries, which could have implications for fishing impacts on VMEs. The effects of climate changes on fish stocks and ocean environments such as ocean warming are being pursued in cooperation with PICES in accordance with NPFC–PICES Framework for Enhanced Scientific Collaboration in the North Pacific established in 2019. International Cooperation as a governance component of the ecosystem approach to fisheries is part of the NPFC mandate according to the Convention.

Recognizing that scientific research provides input to the overall management planning and setting of regulations, these then become effective when appropriate implementation mechanisms are in place and operational. NPFC has been developing its compliance mechanisms and tools to complete the management process of implementation of conservation and management measures to protect the deep sea fisheries, their ecosystems and biodiversity elements.

Vessel Registration No vessel is permitted to operate in the NPFC Convention Area without it being authorized by a Member of the Commission and published on the Vessel Registry or Interim Vessel Registry for non-Member Carrier Vessels. The Vessel Register currently includes all deep water fishing vessels and approximately 1200 small pelagic vessels which are now included in the deep sea fisheries.

VMS All vessels fishing for bottom fisheries are required by the NPFC conservation and management measures to have an active vessel monitoring system (VMS) operating at all times when in the Convention Area, monitored by Members. This is now being enhanced with the ongoing development of a regional VMS whereby Members will forward all their VMS data to the regional VMS managed by the Secretariat. The regional VMS is expected to be fully operational within 2020 and can also be useful in monitoring compliance with closed areas to further protect VMEs and reduce SAIs.

Observers No bottom fishing vessel is permitted to operate in the Convention Area without 100% observer coverage of its operations. The observer program is now being expanded to other fisheries and activities.

High Seas Boarding and Inspection and IUU Vessel Listing Members are actively monitoring vessel activities in the Convention Area and are implementing boarding and inspections at sea with

the first year of operations resulting in 38 boarding and inspections. The monitoring of the vessels active in the Convention Area has already resulted in 33 vessels being listed on our IUU Vessel List which is shared with FAO and 11 other RFMOs.

Limitation of Fishing Effort NPFC has set limits on all authorized fishing vessels for key target species with no increase in effort to be permitted until stock assessments are completed. The numbers of authorized fishing vessels and active vessels are being closely monitored each year to ensure compliance with these limitations.

Outreach and Cooperation For the conservation and management of fisheries resources and protection of marine biodiversity, NPFC is actively cooperating with other regional fisheries management organizations and relevant international organizations with similar mandates, including FAO ABNJ Deep-Sea Project, COFI, RSN, UN BBNJ, UNFSA, NPAFC, PICES, and WCPFC and looking to establishing similar arrangements with IATTC and SPRFMO.