

## U.S. Submission related to paragraph 213 of UNGA Resolution A/Res/74/18

The United States remains committed to protecting vulnerable marine ecosystems (VMEs) from destructive fishing practices. In that regard, the United States has taken action both within areas under its national jurisdiction and areas beyond national jurisdiction to give effect to the relevant UNGA Resolutions 64/72, 66/68, and 71/123. These actions are detailed below, reflecting both domestic and international progress, focusing on those activities taken by the United States since our response to UNGA Resolution Res 70/75 submitted in April 2016.

The United States notes the substantial progress made by States, individually and at the regional and global levels, to implement the relevant provisions of UNGA Resolutions 61/105, 64/72, 66/68, and 71/123. These UNGA Resolutions and the provisions of the FAO Guidelines, if fully implemented, provide tools to protect VMEs from significant adverse impacts from destructive fishing practices and ensure the long-term sustainability of deep sea fish stocks. We further note appreciatively that implementation of these commitments has progressed significantly in those regions where it had been lacking in the last bottom fishing review. Additionally, since 2016, scientific understanding of the functionality of VMEs and their relationship to supporting healthy fisheries has dramatically improved, and this scientific progress should be reflected in the development of recommendations for the review process. We look forward to a robust review of these matters at the two-day workshop being convened by the Secretary General in August 2020 and informal consultations to negotiate the UN General Assembly sustainable fisheries resolution in November 2020. The United States is prepared to work with States at the UN and elsewhere to ensure the objectives and provisions of UNGA Resolutions 61/105, 64/72, 66/88, and 71/123 are fully met.

### *Implementation of the Deep-Sea Fisheries Guidelines*

The United States has been working to implement the 2008 International Guidelines for the Management of Deep-sea Fisheries in the High Seas of the Food and Agriculture Organization of the United Nations in order to sustainably manage fish stocks and protect vulnerable marine ecosystems, both through actions taken individually and in cooperation with other countries in RFMO/As in which the United States is a member or participant, as reflected below.

The United States is pleased to support the FAO's continued efforts to assist States and RFMOs in their implementation of the Guidelines. The United States collaborates with the FAO and other partners on this work through the Common Oceans initiative, specifically the Sustainable Fisheries Management and Biodiversity Conservation of Deep-sea Ecosystems in the Areas Beyond National Jurisdiction (ABNJ) project. This project has assisted governments and industry in the North Pacific and the Indian Ocean to more fully implement the requirements of the relevant UNGA resolutions, as well as supported scientific advancements, including novel work on the importance of sponge communities to the overall functioning of benthic environments and their impact to mitigate climate changes in the deep ocean.

## Coastal State Implementation

Since 2015, the United States has taken important actions within our EEZ to reduce the risk of significant adverse effects from deep-sea fishing to vulnerable benthic habitats (equivalent to VMEs). These actions include the following area-based management measures:

- In 2016, the Papahānaumokuākea Marine National Monument was expanded to include additional deepwater areas. The total area protected (1,508,870 km<sup>2</sup>), makes this monument the largest MPA in the U.S. The monument's seamounts include many VME resources with population connectivity and similar habitat to those outside the U.S. EEZ in the region of the North Pacific Fisheries Commission.
- Also in 2016, the United States established the Northeast Canyons and Seamounts Marine National Monument. With the exception of a small red crab fishery, the monument prohibits all bottom-contact fishing gear within its area. The New England Seamounts in the monument are a portion of a longer chain extending into the Northwest Atlantic Fisheries Organization (NAFO) area. Genetic studies have confirmed population connectivity of VME indicator species (cold-water corals) inside and outside the U.S. EEZ and NAFO has protected these areas as VMEs.
- In 2017, National Oceanic and Atmospheric Administration (NOAA) established the Frank R. Lautenberg Deep-Sea Coral Protection Area, the largest MPA in the U.S. Atlantic. The area encompasses areas of known or highly likely coral presence in underwater canyons or slope areas along the continental shelf edge, as well as a precautionary closure of deeper areas out to the edge of the U.S. EEZ. Within the protected area, most types of bottom-tending fishing gear such as trawls, dredges, bottom longlines, and traps are prohibited in order to protect deep-sea coral habitat.
- In November 2019, NOAA approved the New England Fishery Management Council's Omnibus Deep-Sea Coral Amendment. When implemented, the amendment will protect deep-sea coral gardens in the Gulf of Maine, along with more than 65,000 km<sup>2</sup> of offshore canyons, slope and seamounts from impacts of most bottom-contact fishing gears. This action encompasses areas out to the limit of the U.S. EEZ and represents a companion to the protections implemented under the Lautenberg Deep-Sea Coral Protection Area to the south.
- In January 2020, new essential fish habitat and deep-sea coral protection measures went into effect for the U.S. West Coast (Pacific Fishery Management Council Region) to minimize significant adverse impacts from groundfish fisheries. This action protects an additional 319,000 km<sup>2</sup> of seafloor containing vulnerable habitats from bottom trawling.

As a result of these actions, protection of vulnerable deep-sea habitats from significant adverse impacts from deep-sea fishing has become a central theme in U.S. ecosystem-based fisheries management.

## **Flag State Implementation**

Currently, only one U.S. vessel is authorized to conduct bottom fisheries in areas beyond national jurisdiction, in the NAFO Convention Area. No U.S. vessels are authorized to conduct bottom fisheries in areas beyond national jurisdiction outside of RFMOs. Two of the primary statutes that influence the regulation of fishing activities by U.S. vessels in areas beyond national jurisdiction that are not covered by an RFMO of which the United States is a member are the High Seas Fishing Compliance Act (HSFCA) of 1995 (16 U.S.C. §§ 5501-5509) and the National Environmental Policy Act of 1969 (NEPA). The United States regulates activities of U.S. flagged fishing vessels operating on the high seas pursuant to the HSFCA. The purpose of HSFCA is to establish a system of permitting, reporting and regulating U.S. vessels that fish on the high seas and to implement the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (the Compliance Agreement). For high-seas fisheries where the U.S. permits are issued, U.S. fishing vessels engaging in commercial harvesting operations on the high seas must have a valid permit aboard. The HSFCA includes requirements for the installation and operation of enhanced mobile transceiver units for vessel monitoring, carrying observers on vessels, reporting of transshipments taking place on the high seas, and protection of vulnerable marine ecosystems.

In 2015, the HSFCA was amended to address impacts to VMEs from bottom fishing consistent with international conservation and management measures recognized by the United States and the United Nations General Assembly resolutions regarding VMEs. The United States may specify conditions and restrictions in the permit to mitigate adverse impacts on VMEs, which may include the types of conditions that have been adopted in relevant RFMO measures recognized by the United States.

As a matter of U.S. policy, permits are only issued for those fishing activities reviewed pursuant to NEPA. NEPA generally requires U.S. federal agencies to evaluate the potential environmental impacts when planning an action. Should NMFS decide to authorize bottom fishing on the high seas in the future, outside of RFMOs, such authorization will only be granted upon completion of an assessment of impacts to the environment, including on VMEs.

## **Progress in RFMOs**

The United States is a member of several RFMOs with competency to manage deep sea fisheries, including CCAMLR, NAFO, NPFC, and SPRFMO. We continue to work within these organizations to improve and enhance conservation and management measures, taking into account the best available science. Each of these RFMOs have adopted management measures for target and non-target stocks, reflecting the ecosystem-approach to fisheries management and the precautionary approach, as well as protection for VMEs from bottom fishing activities.

The United States strongly supports transparency and information being publicly available, and therefore supports RFMO/As with the competence to regulate bottom fisheries to make assessments and the measures adopted pursuant to paragraph 83 of UNGA Resolution 61/105 publicly available via their organization's website or other means available. The United States notes that the measures adopted by CCAMLR, NAFO, SPRFMO, and SEAFO are publicly available on their websites.

*Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)*  
CCAMLR has been implementing several Conservation Measures related to bottom fishing in its Convention area since November 2008. In addition to prohibiting the use of bottom trawling gear in the high seas areas, CCAMLR set out guidelines for notifying the Secretariat of encounters with VMEs during both fishing and research operations.

The CCAMLR Scientific Committee continues to identify new VMEs and VME Risk Areas from bottom fishing activities. A VME is declared with direct evidence: VMEs are detected, and their presence confirmed, through fishery-independent research activities. A VME Risk Area is an area where 10 or more VME indicator species are recovered within a single line segment by a fishing vessel during fishing activities. CCAMLR maintains a registry of 53 VMEs and 76 VME Risk Areas in the Convention Area. CCAMLR has measures in place for notifying the Secretariat when a vessel encounters VME indicator species (CM 22-06/Annex B), and notification and move-on rules to minimize further impact of a possible VME (CM 22-07).

- In 2016, one VME Risk Area was added to the VME Registry, which is maintained by the Secretariat and available for public download from the CCAMLR website (<https://www.ccamlr.org/en/document/data/ccamlr-vme-registry>).
- In 2018, seven VMEs were added to the VME Registry.
- Also in 2018, the United States submitted a paper (CCAMLR-XXXVII/19) on a spatial analysis undertaken to examine whether bottom longline fishing activities had taken place within relevant VMEs and VME Risk Areas. The United States identified several instances of longline fishing gear that appeared to have been set inside VME Risk Areas between 2011 and 2017 and introduced a number of recommendations in response to these findings. This prompted Flag State investigations and revealed reporting inconsistencies in how start and end set information is reported to the Secretariat. Further, this prompted scrutiny of how CCAMLR might strengthen its monitoring of VME Risk Areas and review its VME-related Conservation Measures.
- In 2019, the Scientific Committee established a new e-group to facilitate implementation of a new VME work plan which will review data collected on VMEs and existing methodologies with an aim to develop recommendations for the Scientific Committee and Commission for possible changes to conservation measures as appropriate.

### *North Pacific Fisheries Commission*

The United States ratified the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean and became a member of NPFC in 2017. NPFC has adopted two bottom fishing measures: (1) Bottom fisheries and Protection of VMEs in the NW Pacific Ocean (CMM 2019-05), and 2) Bottom fisheries and Protection of VMEs in the NE Pacific Ocean (CMM 2019-06). In addition, the NPFC adopted an Adaptive Management Plan for North Pacific Armorhead. It includes an annual survey that determines whether or not there will be additional closed areas and harvest limits. Details are in CMM2019-05.

Finally, NPFC has engaged in efforts to improve its scientific understanding of VMEs in the area. For example, NPFC and FAO collaborated on a VME workshop in spring 2018. The report of this meeting is available at <https://www.npfc.int/system/files/2020-01/WS%20VME01%20Final%20Report.pdf>.

### *South Pacific Regional Fisheries Management Organization*

The United States ratified the Convention on the Conservation and Management of the High Seas Fishery Resources in the South Pacific Ocean and became a member of SPRFMO in 2017. The United States does not have fishing vessels targeting SPRFMO resources but engages in debates over bottom fishing as a member of SPRFMO to promote consistency with UN resolutions and FAO Guidelines related to preventing significant adverse impacts on VMEs.

SPRFMO continues to improve the comprehensive conservation and management measure on bottom fishing it adopted in 2014. SPRFMO adopted a revised bottom fishing measure in 2019 that incorporates a spatial management approach and a new protocol for encounters with VMEs (see <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/2019-CMMs/CMM-03-2019-5Mar2019.pdf>). SPRFMO also adopted a conservation and management measure for deepwater species (see <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/2019-CMMs/CMM-03a-2019-5Mar2019.pdf>). At its 8<sup>th</sup> Commission Meeting in February 2020, SPRFMO adopted revised deepwater species and bottom fishing management measures, including amending the stony coral weight thresholds for triggering the VME encounter protocol. The SPRFMO decision to amend weight thresholds reflect an effort to apply the precautionary approach and mitigate the risks of significant adverse impacts on VMEs given uncertainties in the predictions of the habitat suitability model for VMEs.

SPRFMO will conduct a review of its bottom fishing measure in 2021. To support that work, in 2019, SPRFMO's Scientific Committee considered how to improve the VME encounter thresholds as well as outlined an approach to review the list of species considered to be VMEs. The Scientific Committee recommended that new thresholds and species lists be considered during the 2021 review, taking into account progress at other RFMOs. SPRFMO will convene a workshop on the margins of the Scientific Committee meeting in 2020 to consider spatial management approaches for bottom fisheries that will further inform the review of the bottom fishing measure in 2021.

*Northwest Atlantic Fisheries Organization (NAFO)*

Since 2016, NAFO has continued to refine management measures to protect vulnerable marine ecosystems, including dramatically increasing the scientific understanding of the role of VME taxa, such as sea pens and sponges, on the overall health of the benthic environment. These advances will inform the 2020 and 2021 review of management measures to protect VMEs in NAFO regulatory waters.

In addition, in 2016, as a result of a U.S. proposal, NAFO closed an additional 239 km<sup>2</sup> of its Regulatory Area to protect significant concentrations of sea pens, although some of this area was later re-opened in 2019 to fishing activities pending a full review of NAFO VME closures planned in 2020. In 2017, also as a result of a U.S. proposal, NAFO agreed to close additional seamounts, and in doing so, protect the entire New England Seamount chain. The protection of the entire chain helps to maintain biological connectivity and functioning of seamount communities at all depths. NAFO is convening a workshop in August 2020 to draft ecosystem objectives, as well as a meeting of the U.S.-chaired Joint Commission-Scientific Council Working Group on Ecosystem Approaches to Fisheries Management that will inform the comprehensive review of its bottom fishing measure.

Parallel to these VME protection efforts, NAFO has advanced its efforts to develop a roadmap to implement an ecosystem approach to fisheries management. Over the past few years, scientists and managers have refined the goals of the roadmap, agreeing that will be an important tool to inform managers of the larger ecosystem impacts of management decisions.

*Western Central Atlantic Fishery Commission (WECAFC)*

The United States strongly supports States cooperating and making efforts to establish, as appropriate, RFMO/As competent to regulate bottom fisheries in areas beyond national jurisdiction where no such organizations or arrangements exist, pursuant to paragraph OP124 of resolution 64/72. Further, the United States reminds States of their commitments under paragraph 86 of resolution 61/105 and paragraph 120 of resolution 64/72. Therefore, the United States continues to call upon flag States to either adopt and implement measures in accordance with paragraph 83 of resolution 61/105 and 119 of resolution 64/72, or cease to authorize fishing vessels flying their flag to conduct bottom fisheries in areas beyond national jurisdiction where there is no RFMO/A with the competence to regulate such fisheries or interim measures, until measures are taken in accordance with the relevant paragraphs of resolutions 61/105 and 64/72 and consistent with the Guidelines.

The United States actively participates in and fully supports WECAFC's preparatory process to consider the future of the organization as a Regional Fisheries Management Entity or Arrangement. In 2014, the United States participated in the Technical Workshop on Bottom Fisheries in the High Seas of the Western Central Atlantic, organized by the FAO and WECAFC. This meeting explored the location of VMEs in the area, and possible fishing impacts on these VMEs.

## Capacity Building

The United States recognizes the specific challenges developing countries may face in giving full effect to certain technical aspects of the FAO Guidelines, and the implementation of relevant paragraphs of UNGA Resolutions 61/105 64/72, and 66/88. To that end, NOAA is a partner in the GEF's Areas Beyond National Jurisdiction (ABNJ) Program on deep seas, which assist developing nations in their implementation of the FAO Guidelines. Among a number of other initiatives, project partners have examined RFMO management measures and developed best practices for consideration by those organizations, industry partners and stakeholders.

## Scientific Research to Support Management

The United States has a robust scientific program to improve our understanding of deep water ecosystems, with a goal of informing management decisions. NOAA maintains a database of Deep-Sea Corals and Sponges (<https://deepseacoraldata.noaa.gov/>) that includes over 740,000 records. Of these, over 7,000 records are from high seas areas in fishable depths. Additional information on recent U.S. research on VMEs is summarized in NOAA's report "The State of Deep-Sea Coral and Sponge Ecosystems of the United States." (Hourigan, 2017)

Some highlights of this work since 2016 include:

*Exploration and characterization of deepwater vulnerable marine ecosystems.* Since 2015, the U.S. has led major expeditions in both the Pacific and the Atlantic that have discovered new VMEs and enhanced understanding of their importance and connectivity. Examples include:

- The 3-year Campaign to Address Pacific monument Science, Technology & Ocean Needs (CAPSTONE), conducted the first ROV surveys for many of these U.S. and international regions in the Central & Western Pacific (Kennedy et al. 2019). A major focus of the surveys was to identify high-density deep-sea coral and sponge habitats (i.e., VMEs). Of 188 Dives, 56 included previously unknown High (> 5,000 per km) or Very High (> 10,000 per km) deep-sea coral or sponge communities – including within the management areas of NPFC and SPRFMO. The CAPSTONE project resulted in more than 635,000 km<sup>2</sup> of seafloor mapped, including fishable seamounts in areas beyond national jurisdiction. This campaign aboard the NOAA Ship Okeanos Explorer allowed remote participation by nearly 270 scientists, students and managers from around the world. Initial results contributed to the 2016 expansion of the Papahānaumokuākea Monument to become the largest MPA in U.S. waters.
- National Science Foundation (NSF) funded surveys of important fishing grounds in Emperor Seamounts (NPFC region) which revealed the first deep-sea coral reefs known from the region (Baco et al. 2017). These surveys are providing information that can help clarify timelines for VME recoveries (Baco et al. 2019). U.S. scientists have also participated in additional research and mapping in the SPRFMO and NPFC regions with support from NOAA and the Ocean

Exploration Trust, the Schmidt Ocean Institute, and the Government of South Korea.

- The United States and Canada published results of joint research on VMEs of Cobb Seamount (NPFC) (Du Preez et al. 2015, Du Preez et al. 2016).
- NOAA is collaborating with European, Canadian, and other partners in the North Atlantic to expand mapping, research and exploration. In 2018, NOAA hosted a science planning workshop for the Atlantic Seafloor Partnership for Integrated Research and Exploration (ASPIRE). VMEs were identified as a priority and there are plans for additional exploration in the region by the NOAA Ship Okeanos Explorer.

In addition, the United States has led modeling efforts to better understand the distribution of VMEs & VME indicator and their habitat suitability. This work includes:

- In a series of papers, researchers from Alaska have developed and ground-truthed new deep-sea coral and sponge predictive models (Rooper et al. 2014, Sigler et al. 2015, Rooper et al. 2016, Rooper et al. 2017).
- A subsequent study used modeling techniques to show that in both the Bering Sea and the Aleutians, the presence of structure increases the density of rockfishes (Rooper et al. 2019). They concluded that removal of deep-sea corals and sponges is likely to reduce the overall density of rockfishes, an important commercial fisheries species.
- New deep-sea coral and sponge distribution models for the Northwest Atlantic are under development based on both presence and absence data (previous models have all been presence-only models).
- Bauer et al. (2017) developed deep-sea coral habitat suitability models for Hawaii (Bauer et al. 2016).
- New deep-sea coral and sponge models for the U.S. West Coast have been completed (Poti et al. in review)
- In 2019, NOAA supported an international workshop on good practices for species distribution modeling of deep-sea corals and sponges: data collection, analysis, validation, and communication (Ms. In review)

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