Outlook

A Final Decision with Irreversible Consequences for Oculina Reefs

From Russell Moffitt <Russell.Moffitt@marine-conservation.org>
Date Thu 1/22/2026 7:57 PM
To Kathleen Howington <Kathleen.Howington@safmc.net>

Dear members of the South Atlantic Fishery Council, Council staff, and advisory panels:

As the Council approaches a final decision regarding proposed changes to protections for the Northern Oculina Habitat Area of Particular Concern, Marine Conservation Institute wishes to convey the collective concerns of the scientific community regarding the potential consequences of this action.

Attached below is a scientist sign-on letter, endorsed by more than 250 marine scientists and related experts, summarizing decades of peer-reviewed research on the ecological importance, vulnerability, and limited recovery potential of deep-sea Oculina coral reefs. The letter outlines the scientific basis for opposing rock shrimp bottom trawling in close proximity to live Oculina corals within the area designated as the Shrimp Fishery Access Area (SFAA) and urges the Council to reject Coral Amendment 11 and Shrimp Amendment 12.

The signatories include:

- Members of the Council's Coral Advisory Panel, which has previously advised against allowing trawling near live Oculina coral reefs;
- Internationally recognized marine conservation scientists, including Sylvia Earle, Rashid Sumaila, and Callum Roberts;
- Marine scientists from Florida-based institutions and research laboratories, including Florida Atlantic University and Florida State University;
- Researchers with direct, long-standing experience studying the structure, function, and ecological role of the Oculina reef system; and
- Coral experts from around the world.

The scientific concern is not rooted in opposition to fishing broadly, but in the disproportionate risk posed by reopening even a relatively small area (approximately 14 square nautical miles) to bottom trawling adjacent to the last remaining intact Oculina reefs. As documented in the Council's own analyses, the economic benefits of this action are uncertain, while the ecological consequences would be irreversible.

While deep-sea Oculina corals may be unfamiliar outside scientific circles, they are foundational to the ecosystems and fisheries they sustain. If a catastrophic event had destroyed 90% of the Sistine Chapel ceiling, it would be unthinkable to sanction the loss of the remaining 10% of Michelangelo’s masterpiece; the global response would be unequivocal outrage. The same principle applies to the stewardship of irreplaceable marine ecosystems—when what remains is both rare and irreplaceable, protection is not optional but imperative.

At this late stage, the undersigned scientists respectfully urge the Council to apply the precautionary principle and maintain existing protections by rejecting amendments that could reasonably result in the loss of the final intact Oculina deep-sea coral reefs on Earth.

For the ocean,

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Marine Conservation Institute

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Mr. Andy Strelcheck
Southeast Regional Administrator, NOAA Fisheries
263 13th Avenue South
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Scientist Opposition to Shrimp Trawling in the Proposed Shrimp Fishery Access Area Adjacent to Oculina Deep-Sea Coral Reefs in the Oculina Habitat Area of Particular Concern

Dear members of the South Atlantic Fisheries Management Council and NOAA Fisheries Regional Administrator:

Understanding that your decision on opening a part of the northern Oculina Habitat of Particular Concern (HAPC) to rock shrimp trawling is imminent, we the undersigned marine scientists would be remiss if we didn't remind the Council and NOAA Regional Administrator that:

- These deep-sea Oculina coral reefs are unique and occur nowhere else on this planet. Partly for this reason, Oculina HAPC is the first deep-sea coral (i.e., set aside in 1984) protected area in the world[1]. Oculina deep-sea corals have been designated by NOAA as a "Species of Concern" since 1991[2]. And identified by the IUCN as a 'Vulnerable" species.
- The structure, function, and location of Oculina reefs have been extensively explored and well documented by dozens of scientific papers. Intact reefs support healthy populations of valuable game fish and thousands of other important species[3].
- Ninety percent of these reefs have been destroyed over the last 40-50 years by shrimp trawling and other bottom fisheries, making this area proposed for opening part of the last 10% of such deep-sea Oculina coral reefs in existence[4].
- Deep-sea Oculina corals grow very slowly and require abundant nearby populations to repopulate after damage. In most places where coral destruction has occurred over the last 40-50 years, there has been very little recovery for both those reasons. If the last 10% of corals are damaged by this proposed trawling, there will be no intact Oculina reefs on the planet.
- To protect the remnant population of healthy deep-sea Oculina reefs, this particular area being targeted for opening (Northern Oculina HAPC) has been closed to bottom trawling

since 2014, more than 10 years[5].

- Borders of the Northern HAPC were defined using strong, valid marine science with a sufficient buffer strip to keep nearby trawling safely away from the live corals.
- Trawling closer to the corals in the existing buffer strip, as these proposals would allow, will likely result in damage to the corals from off-course trawls hitting corals 150-200 feet down and from the sediment stirred up by bottom trawls that travels on currents documented to flow from east to west over the corals –sediment that has been shown to smother corals and impede reproduction[6].
- Bottom currents (tidal and upwelling) regularly travel from the east to the west over the corals. These east-west currents were documented by bottom current meters over 289 days in the late 1970s. This is the only prolonged, scientifically valid measurement of bottom currents in the area[7]. The Council and Habitat and Ecosystem Committee have tried to ignore this data without providing other data to contradict it, at times resorting to ChatGPT to support their arguments.
- The Coral Advisory Panel, tasked by the Council with advising on issues that impact corals, has advised the Council that opening the Shrimp Fishery Access Area is likely to hurt these corals and that a buffer strip of 1000 meters should separate live coral reefs from bottom trawling. The proposals for Amendments 11 and 12 violate these principles[8].

We, the undersigned scientists ask the Council to reject proposed Coral Amendment 11 and proposed Shrimp Amendment 12 as harmful to this unique deep-sea coral reef formation. The last 10% of this global treasure and the rich marine life it supports should not be sacrificed to supply a tiny area for the rock shrimp fishery.

Sincerely,
We the undersigned scientists:

John Reed, *Research Professor Emeritus*
Lance Morgan, *Marine Conservation Institute*
Sylvia Earle, *National Geographic/Mission Blue*
Mark Hixon, *University of Hawaii*
Les Watling, *Professor Emeritus, University of Hawaii at Manoa*
James Moir, *Indian RiverKeeper*
Holly Bik, *University of Georgia*
Ines Habele, *Florida Atlantic University & Ruder Boskovic Institute*
Esther Guzman, *Florida Atlantic University*
Rashid Sumaila, *Professor*
Steve Ross, *Research Professor*
Edith Widder, *CEO & Senior Scientist, Ocean Research & Conservation Assoc.*
Richard Grant Gilmore, Jr., *Harbor Branch Oceanographic Institution, retired*
April Cook, *Nova Southeastern University*
Jon Moore, *Florida Atlantic University*
Callum Roberts, *University of Exeter*
Jonathan Day, *University of Florida*
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Mark Perry, *Executive Director & CEO, Florida Oceanographic Society*
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Dr Christine Hosking, *University of Queensland*
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[1] John K. Reed, Deep-water Oculina coral reefs of Florida: Biology, impacts, and management, March 2002, Hydrobiologia, 471(1): 43-55, DOI:10.1023/A:1016588901551

[2] NOAA National Marine Fisheries Service, Office of Protected Resources. Ivory Tree Coral (Oculina varicosa), Species of Concern, NOAA National Marine Fisheries Service.

[3] Koenig, C, Shepard, A., Reed, John, Coleman, F, Brooke, S, Brusher, J, Scanlon, K. Habitat and fish populations in the deep-sea Oculina ecosystem of the western Atlantic. American Fisheries Society Symposium 41:795–805, 2005 at https://www.reefball.org/album/florida/EastCoast/oculinabanks/NOAAproject/scientificpaper/2005_koenig_oculina.pdf

[4] Reed, J.; Koenig, C.; Shepard, A. Impacts of bottom trawling on a deep-water Oculina coral ecosystem off Florida. Bulletin of Marine Science, Volume 81, Number 3, November 2007, pp. 481-496(16). https://www.ingentaconnect.com/content/umrsmas/bullmar/2007/00000081/00000003/art00014#

[5] NOAA Fisheries. Oculina Habitat of Particular Concern at https://www.fisheries.noaa.gov/southeast/science-data/oculina-habitat-area-particular-concern

[6] Erftemeijer, P, Riegl, B, Hoeksema, B, Todd, P., (2012) Environmental impacts of dredging and other sediment disturbances on corals: A review. Marine Pollution Bulletin Volume 64, Issue 9, September 2012, Pages 1737-1765. https://doi.org/10.1016/j.marpolbul.2012.05.008

[7] Hoskin, C., Reed, J, Mook, D. (1987) Sediments from a living shelf-edge reef and adjacent area off central eastern Florida. In Maurrasse, F. J. M. (ed.), Proc. Symp. South Florida Geol., Miami geol. Soc. Mem. 3: 42–57.

[8] South Atlantic Fishery Management Council. Coral and Deepwater Shrimp Advisory Panels Meeting Minutes, November 10, 2020, pgs 61-62 in Amendment 10 to the Coral, Coral Reefs, and Live/Hardbottom Habitats FMP of the South Atlantic Region Environmental Assessment, Regulatory Flexibility Act Analysis, and Regulatory Impact Review, November 2021.

[9] Technically the amendments are titled, Amendment 11 to the Fishery Management Plan for Coral, Coral Reefs, and Live / Hard Bottom Habitats of the South Atlantic and Amendment 12 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. https://safmc.net/documents/hec_sc_a1b_c11_s12_draftamendment_202512/

[10] Discussion of historical usage of the area inside the HAPC boundary proposed to be opened to rock shrimp bottom trawling in Amendment 10 to the Coral, Coral Reefs, and Live/Hardbottom Habitats FMP of the South Atlantic Region Environmental Assessment, Regulatory Flexibility Act Analysis, and Regulatory Impact Review, November 2021.pg 53.

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