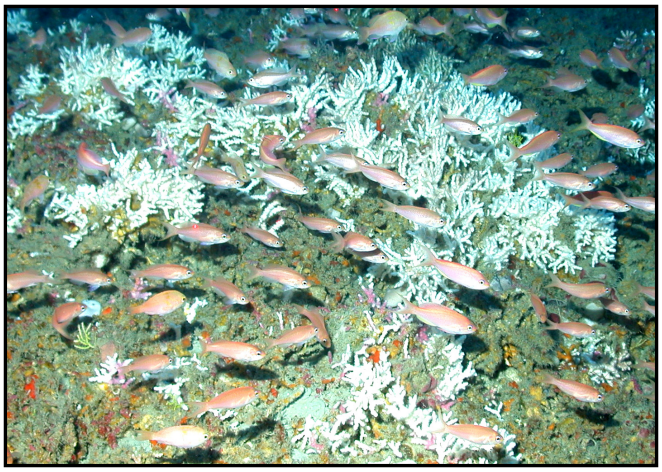
Fishery Management in the South Atlantic States

The South Atlantic Fishery Management Council (SAFMC) is the governing body that establishes fishing regulations for the federally legislated waters of the southeastern United States. Specifically, this refers to a zone from 3 to 200 nautical miles off the coasts of North Carolina, South Carolina, Georgia and eastern Florida. Federal mandates emphasize the need for an *ecosystem-based approach to fisheries management* that is based on the best available scientific information.

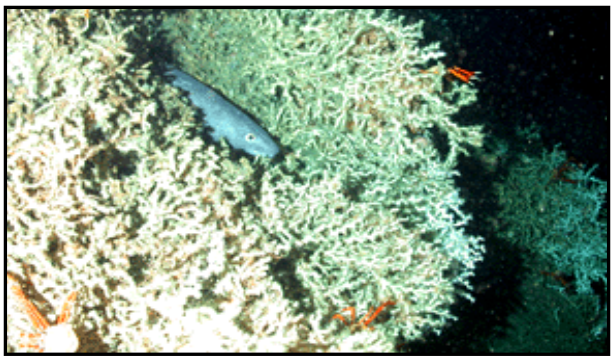
Through NOAA's Undersea Research Center for the Southeast US and Gulf of Mexico (NURC-SEGM), NOAA's Undersea Research Program (NURP) and partners provide the SAFMC with the best available scientific data on the region's fisheries and undersea habitats. The SAFMC has made key management decisions based on NURP-led research, for example:

Oculina Bank: The Oculina Bank is home to the world's only known deepwater stand of ivory tree coral (*O. varicosa*). Situated at depths of 60 to 100 m, pinnacles 30 m in height built by *O. varicosa* extend 90 nautical miles along Florida's continental shelf edge. Based on research conducted from 1995 to 2003 by NURC-SEGM; the Harbor Branch Oceanographic Institute (HBOI); and NOAA partners, the SAFMC voted in 2004 to indefinitely continue a ban on trawling in the Habitat Area of Particular Concern (HAPC), a portion of the Oculina Bank that may have reopened to trawling in 2004. This decision was critical to NOAA's continued efforts to sustain what remains of the Oculina Bank ecosystem and rebuild healthy coral habitat in damaged areas.



Top and Middle: Healthy reefs of *O. varicosa* teem with life. Bottom: *O. varicosa* decimated by trawling are no longer able to support reef fish. Photos: NURC/UNCW and HBOI.

Deep Water Habitat Characterization: Deep waters (>100 m) off the southeast US contain coral banks down to 1000 m as well as economically valuable species such as grouper, tilefish, and crabs. The SAFMC was concerned that following the closure of the Oculina Bank HAPC to trawling, fishing would move to other reefs, including those in deeper waters. NURC-SEGM and HBOI identified deep sea coral habitats that most needed protection, contributing to a 2004 decision by the SAFMC to grant HAPC status to ten new deepwater coral areas, located from Cape Lookout, NC, to the Pourtales Terrace south of the Florida Keys. Additionally, the SAFMC and NURC-SEGM have partnered to develop an autonomous undersea vehicle (AUV) equipped to produce high resolution habitat maps at depths to 2200 m.



Lophelia pertusa reefs occur in patches along the SE US at 300 to 850 m depth. Photo: UNCW

Management of Bluefin Tuna: More bluefin tuna (*Thunnus thynnus*), which can be worth up to $30,000 per fish, are caught off North Carolina than any other state on the eastern seaboard. While US regulations strictly limit access to this species via licenses; gear and catch restrictions; and seasonal closures, European regulations in the eastern Atlantic are less stringent. To determine whether US and European tuna should be managed as one stock, NURC-SEGM and NOAA Fisheries worked with Stanford University's Dr. Barbara Block, perhaps the world's leading expert on bluefin tuna migrations, to launch a program that uses satellite tags to track the tuna's annual movement. Resulting data has contributed significantly to proposals to change the international management of bluefin tuna.

Biologist Barbara Block of Stanford tags a giant bluefin tuna to track its migration pattern. Photo: Tuna Conservation and Research Center

NURP-supported studies have confirmed that bluefin tuna migrate across the Atlantic, suggesting that tuna on opposite sides of the Atlantic be managed as one stock.

By-catch Reduction Devices: Shrimping is one of the southeastern US's most lucrative fisheries and one that may be particularly harmful to juvenile finfish that occupy shrimp habitat. By-catch reduction devices such as nets with large openings near the top permit fish to escape while retaining shrimp. NURC-SEGM determined that such devices, now in commercial use, reduced by-catch up to 50 per cent along the Georgia and South Carolina coasts.

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