

# South Atlantic Deepwater Longline Survey (SADLS)

## Project narrative

### 1. Project summary.

The South Atlantic Deepwater Longline Survey (SADLS) is a collaboration between the South Carolina Department of Natural Resources (SCDNR), the Southeast Fisheries Science Center (SEFSC) and collaborating fishers to collect information on deepwater demersal finfish and elasmobranchs in waters off the southeastern US using standardized longline gear. SADLS is a long-term survey using a standardized sampling design. Sampling takes place annually following consistent pre-determined scientific methods. Observers accompany the collaborating fishers during fieldwork to collect data and samples of the caught fish. SCDNR and SEFSC staff will coordinate design, field sampling, collection of data, and all other activities. SCDNR staff will coordinate and administer contacts with collaborating fishers.

### 2. Goal

To contribute to and improve the quality of fisheries, stock assessments, and coastal ecosystem management by providing high quality data to evaluate deepwater demersal finfish stocks off the Southeastern US using a longline survey in collaboration with commercial fishers.

### 3. Objective:

Collect annual fishery-independent data on abundance, distribution, life history, habitat and other relevant information of populations of deepwater finfish and elasmobranchs from the North Carolina/Virginia border through the Florida Keys, FL. Make that data and related analyses available to support stock assessments and fisheries management.

### 4. Background

The NMFS SEFSC initiated a regional-scale South Atlantic Deepwater Longline survey in 2020 cooperatively with South Carolina Department of Natural Resources-Reef Fish Survey (SCDNR-RFS). This survey targets deepwater demersal species such as blueline (gray) tilefish *Caulolatilus microps*, golden tilefish *Lopholatilus chamaeleonticeps*, snowy grouper *Hyporthodus niveatus*, speckled hind *Epinephelus drummondhayi* and Warsaw grouper *Hyporthodus nigritus*. The survey built on previous cooperative research and survey projects (e.g., 2015 SEFSC Atlantic Coast blueline tilefish data collection project; 2016 Gulf & South Atlantic Fisheries Foundation S/K funded deepwater longline project; SCDNR-RFS CRP-funded South Atlantic deepwater longline project), as well as recommendations generated from the CRP-funded 2015 South Atlantic Deepwater Survey Workshop. In 2020 a survey steering committee comprised of NMFS and SCDNR-RFS scientists developed and implemented a standardized longline sampling design. Two collaborating commercial fishers participated in the fieldwork, which was completed in the fall of 2020. In the months following, the steering committee evaluated the design and survey results and made adjustments. In January and February of 2021, the adjusted sampling design was completed for the 2021 sampling season, resulting in an anticipated significant increase ( $\approx$ tripling) in sampling efforts.

### 5. Approach

The survey design and gear descriptions will be closely coordinated, discussed, and determined by SADLS associated scientific staff including Walter Bubley (SCDNR), Todd Kellison (SEFSC), Blake

Price (SEFSC) and others. Details will be included in the bid solicitation. Note that the decisions on sampling design and gear configuration is not directly associated with this scope of work. The sampling areas will be divided in 4 sampling regions. It is expected that SCDNR will solicit separated bids for completing sampling in each of the 4 regions. SCDNR staff will coordinate all contract and fieldwork-related interactions with the collaborating fishers, and maintain close communications with SEFSC staff, NOAA observers, and the NOAA observer coordinator. SCDNR will also receive and maintain the biological samples collected during the project. However, unless additional funding becomes available SCDNR cannot process these samples.

## **South Atlantic Deepwater Longline Survey (SADLS)**

### **Scope of Work**

#### **Scope of Work Year 1 (May 1, 2021- December 31, 2021)**

Dr. Walter Bubley (SCDNR) will continue to coordinate all activities, including refining sampling design in collaboration with SEFSC staff, drafting bid packages, coordinating all contract activities with SCDNR administrative staff, and overseeing all fieldwork. He will also oversee all contracting activities of collaborating fishers with commercial longline experience (hereafter referred to as industry participants) to carry out the SADL survey in 2021, as well as meeting with industry participants to prepare and monitor fieldwork. The exact sampling design will be determined no later than May 1, 2021 by the SADLS-associated SCDNR and SEFSC staff. Survey sampling requirements will include but are not limited to:

- Gear specifications,
- Gear deployment methodologies (e.g., allowable hours of sampling; seasonal window for sampling),
- Depth and latitudinal strata, and
- Methods for selecting sampling locations within strata (e.g., pre-determined versus captain's choice)

Terms of the contracts with industry participants will dictate that sampling be carried out according to the sampling guidelines established by SADLS. Sampling effort will be distributed over the entire region with sampling equally across depth and latitude strata, unless specified otherwise by the SADLS. All sampling is expected to be completed by October 15, 2021 as not to overlap with the Right Whale migration season in accordance with the current Letter of Acknowledgement (LOA).

Contracts will be awarded to balance the need for expert industry participants (who may have higher day rates than less-qualified potential industry participants) with the need to maximize total SADLS sampling effort (number of gear deployments). All contracts with Industry participants will comply with SCDNR and SC State contracting and procurement procedures.

Note that 62% of the sampling activities (sea days) in 2021 will be funded by the SADLS grant, while the remaining 38% will be funded by MARMAP. However, all sampling activities will be closely coordinated to comply with overall SALDS goals and objectives.

Sampling is scheduled to be completed by October 15 each year and the Scope of Work in year 1 will cover activities in from May 1, through December 31, 2021.

A brief summary of the expected proposed methodology:

The sampling area will be divided by latitude and/or longitude, creating 15 zones. Each zone will be further divided by depth to create a shallow (75-145m) and deep (146-366m) strata in each zone. Number of gear deployments will depend on the bid process with the fishers. Sampling sites within each stratum will be allocated based on a combination of random selection and sites chosen by the captains (hereafter referred to as captain's choice) for the deep strata. The shallow strata sampling locations will also be allocated to random and captain's choice locations, but additional sites will also be chosen from random selection from a universe of known hard-bottom habitat. At each sampling site, a 3-mile mainline will be

deployed with 150 gangions per mile. Each gangion will consist of one 12/0 offset circle hook with a swivel, 3 feet of 400 lb monofilament, a glow bead, and a clip. The gear will be deployed during daylight hours for ~ 60 minutes at a time.

**Scope of Work adjustments years 2-5 (January 1, 2022 – December 31, 2025)**

In year 2-5 all SADLS sampling activities will be fully funded by SADLS (rather than partially by MARMAP) through the SEFSC. The scope of work will cover each full calendar year for 2022 through 2025). Number of sea days, sampling design, etc. will depend on available funding, and discussed and determined by SADLS-associated SCDNR and SEFSC staff prior to each sampling season. Field sampling is scheduled to be completed between May 1, and October 15 each year in accordance with the SADLS LOA.