

SUPPORTING STATEMENT
Southeast Region Logbook Family of Forms
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Department of Commerce
OMB CONTROL NO. 0648-0016

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Three data collection activities within OMB Control No. 0648-0016 use statistical sampling methods: (1) the collection of cost and earnings data as an add-on to the coastal fisheries logbook; (2) the annual fixed cost survey; and (3) the collection of discard data as a supplement to the coastal logbook. The three data collection activities use the same potential respondent universe and two different sampling methods for sample selection. The two economic collections use the same sample, as the annual fixed cost survey complements the trip-level cost and earnings add-on.

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method used. Provide data on the number of entities (e.g., establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

The population of boats to be sampled was determined from logbook reports submitted to NMFS on an annual basis. Commercial fishermen are required to submit a trip report within seven days after the completion of each Gulf reef fish, South Atlantic snapper-grouper, mackerel, shark, and Atlantic dolphin and wahoo logbook trip. Fishermen who did not participate in these fisheries during a given month are required to submit a no-fishing report at the end of the month.

Annually approximately 3,500 permitted boats take at least one fishing trip in one or more of these fisheries. Approximately 2,500 distinct vessels report fishing activity, i.e., one or more trips, during a typical year. To reduce the reporting burden on the fishermen, two 20-percent samples of the vessels with a federal permit for Gulf reef fish, South Atlantic snapper-grouper, king mackerel, Spanish mackerel, or shark are selected to report economic information and discard information. To assure that the samples are representative of the total universe of vessels with federal permits, stratified, random samples are selected from the universe of all vessels with the above types of federal permits. For the economic collections, the population is stratified by vessel activity during the last two years. The three strata are 1) inactive or new vessels, 2) active vessels with up to 20 days at sea per year, and 3) active vessels with more than 20 days at sea. The active vessel strata are oversampled, while the (large) inactive stratum is undersampled, for a total of approximately 700 respondents annually. For discard reporting, a 20 percent sample is selected randomly from vessels who fished during the previous calendar year, for a total of approximately 500 respondents annually.

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy

needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

The data collection method is comparable to a mail survey, as forms are filled out by respondents. The two samples, economic and bycatch, are selected by stratified random sampling. Many permits are on vessels that are not active commercial fishing vessels and hence they generate no useful data. At the other end of the activity spectrum, a few very active vessels are often responsible for the bulk of landings in any one fishery or gear segment. The intent of both sampling designs is to under-sample inactive vessels and oversample active and highly active vessels. The economic sampling design breaks to population into three activity strata (inactive, less than or equal to 20 days at sea, and greater than 20 days at sea) without further reference to region or gear. The discard sampling design breaks the population into multiple region-gear strata. A random sample will be selected from each stratum, and these vessel owners will be notified of their selection with the mailing of the following year's logbook. It is necessary for those selected to report bycatch or economic data to report all discards and interaction data of all cost and earnings data, respectively, for every trip where they occur. Annual reporting will result in poorer quality data because fishermen will not be able to remember their fishing activity for that length of time.

Data will be used for descriptive and analytical purposes. Descriptive uses include the estimation of average harvesting costs per boat per trip and average discard or interactions per boat trip in the sampling universe. Data collected from sampled boats will be expanded to all boats in the sampling universe based on equations available in statistical texts by Cochran and Thompson. Analytical uses include evaluations of regulatory proposals.

For the annual fixed cost survey, a separate form to collect information about annual fixed costs will be mailed early in a given year to the fishermen selected to report trip-level costs the previous year, with the timing established to take advantage of the availability of information about annual expenditures as recently compiled for end-of-year federal income tax purposes. Trip reports about routine harvesting costs and annual reports about fixed costs will be submitted to the NMFS SEFSC logbook program in Miami, Florida.

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

Project staff obtained input on the data collection program from commercial fishermen throughout the jurisdiction of the South Atlantic and Gulf of Mexico Fishery Management Councils. Input included fishermen's opinions about the types of information that they can provide with minimum burden and the format for collecting data. Their input was used in the development of survey instruments so that they will be easier to complete, with questions revised for clarity and to obtain more accurate data. One of the reasons a sampling procedure is utilized is to provide additional report monitoring by SEFSC logbook staff. Consequently, the response rate and quality should be maximized by close interactions with fishermen. Renewal of permits is contingent on timely reporting to ensure compliance.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

Because of the large universe and the anticipated variation, it is not feasible to do a test with fewer than 10. However, interaction with and feedback from the fishermen that are using the forms will provide sufficient information about the forms and collection procedures to make whatever adjustments are needed. The SEFSC evaluates the data collection programs internally every year and makes minor adjustments to the reporting forms, instructions, database design, scanning and processing procedures, and the quality control procedures. Furthermore, analyses of the data will provide information about the variations in the data to determine whether the strata and sample sizes are appropriate.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Dr. Christopher Liese, NMFS industry economist, identified the sampling universe to be studied and prepared the sampling design. Data is collected in conjunction with the existing logbook data collection program, which is conducted from the SEFSC in Miami, Florida. Data is used primarily in analyses of proposed regulations by NMFS, the South Atlantic Fishery Management Council, and the Gulf of Mexico Fishery Management Council.

The following SEFSC staff have also been consulted on the statistical aspects of this data collection activity:

Dr. David Gloeckner, Acting Division Chief of the Data Management and Fisheries Statistics Division, is responsible for some of these data collection activities: (305) 361-4257.

Dr. Matthew McPherson, Branch Chief of the Social Science Research Group, is responsible for some of these data collection activities: (305) 365-4112.