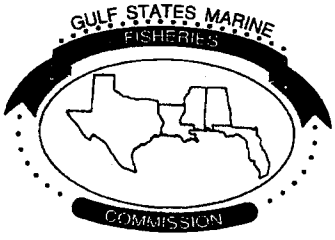
STRATEGIC PLAN

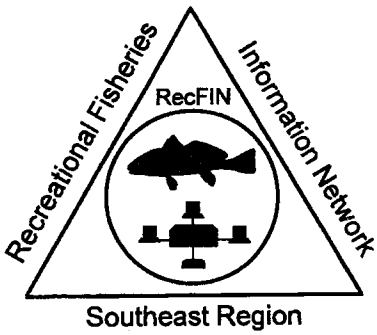
RECREATIONAL FISHERIES INFORMATION NETWORK FOR THE SOUTHEASTERN UNITED STATES

RecFIN(SE)

Published by:
Gulf States Marine Fisheries Commission
Atlantic States Marine Fisheries Commission

May 1998





This project was conducted in cooperation with the U.S. Fish and Wildlife Service, and publication of the document was funded by Federal Aid in Sport Fish Restoration administrative funds Project Nos. 14-48-0009-93-1231 and 14-48-0009-93-1256 .

STRATEGIC PLAN

RECREATIONAL FISHERIES INFORMATION NETWORK FOR THE SOUTHEASTERN UNITED STATES RecFIN(SE)

By: RecFIN(SE) Committee

Published by:
Gulf States Marine Fisheries Commission
Atlantic States Marine Fisheries Commission

May 1993 **Report No. REC93-1**

TABLE OF CONTENTS

ACKNOWLEDGMENTS

The following state and federal agencies are acknowledged for their contributions of personnel and support for development of this Strategic Plan for the RecFIN(SE):

- National Marine Fisheries Service
- Fish and Wildlife Service
- National Park Service
- Alabama Department of Conservation and Natural Resources
- Florida Department of Natural Resources
- Georgia Department of Natural Resources
- Louisiana Department of Wildlife and Fisheries
- Mississippi Department of Wildlife, Fisheries, and Parks
- North Carolina Department of Environment, Health, and Natural Resources
- Puerto Rico Department of Natural Resources
- South Carolina Wildlife and Marine Resources Department
- Texas Parks and Wildlife Department
- U.S. Virgin Islands Department of Planning and Natural Resources
- Caribbean Fishery Management Council
- Gulf of Mexico Fishery Management Council
- South Atlantic Fishery Management Council
- Atlantic States Marine Fisheries Commission
- Gulf States Marine Fisheries Commission

The RecFIN(SE) Plan Development Team members from each of these agencies are listed in Appendix A.

Special thanks go to Carole Goodyear for taking the lead in drafting this strategic plan and to Dr. Albert Jones for chairing this effort. Both are from the National Marine Fisheries Service Southeast Fisheries Science Center (NMFS/SEFSC).

EXECUTIVE SUMMARY

The Southeast Recreational Fisheries Information Network [RecFIN(SE)] is a three year pilot project to establish a state-federal cooperative program to collect, manage, and disseminate statistical data and information on the recreational fisheries of the Southeast Region.[1]

The RecFIN(SE) Strategic Plan is the result of combined efforts of program partners which include states and territories of the Region, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the National Park Service, the South Atlantic, Gulf, and Caribbean Fishery Management Councils, and the Atlantic and Gulf States Marine Fisheries Commissions.

The need for a comprehensive and cooperative data collection program has never been greater because of the magnitude of the recreational fisheries and the differing roles and responsibilities of the agencies involved. Many southeastern stocks targeted by anglers are now depleted, due primarily to excessive harvest, habitat loss, and degradation. The information needs of today's management regimes require data which are statistically sound, long-term in scope, timely, and comprehensive. A cooperative partnership between state and federal agencies is the most appropriate mechanism to accomplish these goals.

Efforts by state and federal agencies to develop a cooperative program for the collection and management of recreational fishery data in the Region began in the mid to late 1980s. In 1992, the National Marine Fisheries Service formally proposed a planning activity to establish the RecFIN(SE). Planning was conducted by a multi-agency Plan Development Team through October 1992 at which time the program partners approved a Memorandum of Understanding (MOU) which established clear intent to implement the RecFIN(SE). Following signing of the MOU, a RecFIN(SE) Committee was established and met in January and March 1993 to complete a Strategic Plan and develop an Operations Plan.

The scope of the RecFIN(SE) includes the Region's recreational fisheries for marine, estuarine, and anadromous species, including shellfish. Constituencies served by the program are state and federal agencies responsible for management of fisheries in the Region. Direct benefits will also accrue to federal fishery management councils, the interstate marine fisheries commissions, the National Park Service, the U.S. Fish and Wildlife Service, and the NOAA Marine Sanctuaries Program. Benefits which accrue to management of fisheries will benefit not only recreational fishermen and the associated recreational fishing industry, but the resources, the states and the nation.

---

[1]The Southeast Region (the Region) includes the states of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Texas, and the territories of Puerto Rico and the U.S. Virgin Islands.

A variety of recreational fisheries data collection programs and projects have been conducted in the past, many of which continue to operate through state and federal agencies. While these programs are useful in meeting a variety of needs, there are many identifiable deficiencies, such as:

- lack of data base compatibility;
- lack of estimate comparability;
- duplication of effort;
- inadequate precision and accuracy of estimates;
- lack of shellfish data; and
- insufficient social and economic data.

The mission of the RecFIN(SE) is to cooperatively collect, manage, and disseminate marine recreational fisheries statistical data and information for the conservation and management of fishery resources in the Region, and to support the development and operation of a national program. The four goals of the RecFIN(SE) include:

- planning, management, and evaluation of data collection and management activities;
- implementation of data collection activities;
- establishment and maintenance of a data management system; and
- support for the establishment of a national program.

To carry out the RecFIN(SE) mission, an organizational structure has been created which includes the RecFIN(SE) Committee; South Atlantic, Caribbean, and Gulf Subcommittees; various other subcommittees and working groups; and administrative and coordination support.

The pilot RecFIN(SE) is a three-year program extending through December 31, 1995. The first year will include:

- development and adoption of the Strategic Plan;
- development and adoption of operations plans for 1993 and 1994;
- establishment of administrative and coordination staffing; and
- development of funding proposals.

The second year will include:

- continuation of planning activities;
- implementation of changes in state-federal data collection, management, and dissemination activities; and
- initiation of internal program evaluation in preparation for an external program review and evaluation in 1995.

The third year will include:

- continuation of planning and implementation activities;
- external program review; and
- evaluation to determine the program's future.

I. INTRODUCTION

A. Purpose of Strategic Plan

This document presents a three-year Strategic Plan for a pilot marine recreational fishery (MRF) statistics program for the Southeast Region of the United States -- the Recreational Fisheries Information Network, RecFIN(SE). This program is a cooperative effort among agencies that are legally mandated to manage MRF resources. These agencies need to plan and effect programs to collect, manage, and disseminate statistical data and information on the Region's recreational fisheries. The goal of the RecFIN(SE)is to provide sound scientific information on catch, effort, and participation that managers need to prudently conserve and manage MRF resources in the Southeast. The program will assist managers in reducing the risks of overharvesting, rebuilding depleted stocks, and achieving optimal use of these resources.

This Strategic Plan is a combined effort of state, territorial, and federal agencies. It was developed under the premise that a cooperative statistics program for marine recreational fisheries in the Southeast will avoid duplication of effort, reduce overall costs, and provide a better base of information for formulating management policies, strategies, and tactics. This plan presents the RecFIN(SE) mission, goals, and objectives and broadly describes how the pilot program will be organized, operated, managed, and funded. This Strategic Plan will be implemented through detailed annual operations plans for each of the three years of the pilot RecFIN(SE).

B. Need for the RecFIN(SE)

Recreational fisheries are extremely important to the Region. In 1991, recreational anglers in the Region took an estimated 34 million fishing trips and caught approximately 201 million fish weighing about 38,000 metric tons. Because of the Region's productive marine fishery resource base and substantial fishing infrastructure, recreational anglers in the Southeast (excluding the Caribbean for which data are lacking due to insufficient funds) account for about 50% of the nation's total sportfishing effort, 51% of the recreational catch in numbers of fish, and 41% of the recreational landings by weight (NMFS 1992). Along the Region's 30,000-mile shoreline are found an estimated 150 coastal fishing piers; 1,600 marinas; 1,600 charter boats; 180 headboats; hundreds of diveboats and small guideboats; untold miles of "fishable" beaches, bridges, and jetties; and an unequaled assemblage of natural and artificial fishing reefs. Furthermore, over 2.8 million private recreational boats are used by the Region's coastal residents for saltwater fishing.

The numerous species harvested by the Region's anglers cover a great range of sizes and habitats, from giant oceanic billfish to small estuarine seatrout. Not to be overlooked are substantial sportfisheries for shrimp, crabs, oysters, and other crustaceans and mollusks. Notably, most of these resources are also utilized for commercial purposes, including providing bait for sport fishermen. Of the 21 fishery units of major concern to managers (NMFS 1991),

7 units are centered in the Southeast Region. In addition, the southeastern states are concerned with many other stocks which are also in poor condition. The species are managed under 13 federal fishery management council plans, 17 interstate marine fisheries commission plans, and a number of state[2] agency plans (NMFS 1992). The complexity of the Region's fisheries is shown by the reef fish management units which include about 100 species (excluding those in the marine aquarium trade) that span wide geographic ranges (SEFSC 1992).

Management of the Region's fisheries is complicated by their migratory nature. Movements along shore bring many stocks under the jurisdictions of multiple states. Furthermore, many species move between inshore and offshore habitats during different stages of their lives and therefore come under both state and federal jurisdiction at various times. Thus, several fishery management agencies often regulate the same resource or stock. All the agencies face the same problem of conserving important marine resources, while at the same time providing satisfying recreational fishing opportunities to their constituents.

Many southeastern stocks targeted by anglers are now depleted, due primarily to habitat loss and degradation, and excessive harvest. In response, state and federal fishery managers have developed and implemented fishery management programs to rebuild depleted stocks and to prevent overharvest of other species. Indeed, more and more Southeast species have been brought under direct management control, and associated regulations have become more diverse and complex. In some cases, resources such as red snapper and king mackerel in the Gulf of Mexico have become so severely depleted that combinations of size limits, bag limits, seasons, and quotas have been implemented to reduce harvests and restore the stocks. In these cases, management information requirements have exceeded the capabilities of existing statistical information programs.

Catch and effort statistics are fundamental for assessing the influence of fishing on stocks. Information on harvest, fishing effort, size composition, and seasonal and geographical distribution of catch and effort is required to develop rational management policies and plans. Accurate, precise, and timely catch statistics, along with biological, sociological, and economic studies, are integral components of long-term data series needed for fishery modeling and forecasting. Detection of population trends requires statistically consistency data collected over the geographic range of the stock for a time period that is several times longer than the average life span of the animal.

Vital information needed to meet minimum management information needs is lacking for many important fishery resources in the Region. This deficiency has been recognized by management agencies, and attempts have been made to improve and expand current efforts. Although considerable progress has been made in collection of fishery statistics, continuing changes in the nature and status of marine recreational fisheries and increasingly complex management regimes require more comprehensive, accurate, precise, and timely data.

---

[2]As utilized in this document, "state" includes the territories of Puerto Rico and the U.S. Virgin Islands.

Thus, initiation of a comprehensive program to cooperatively collect and manage statistics on marine recreational fisheries in the Region is critical. A long-standing partnership exists among fishery management organizations in the Southeast, which have similar or related mandates to conserve and manage living marine resources in their respective jurisdictions. Southeast fishery management agencies recognize the need for and benefits of a cooperative program for MRF statistics.

C. Evolution of the RecFIN(SE)

In the 1980s, state and federal fishery managers in the Southeast agreed there was an urgent and compelling need for coordinated collection of comprehensive data on the Region's marine recreational fisheries resources and recommendations were made through a series of workshops and meetings. In particular, between 1985 and 1992, the Data Management Subcommittee of the Gulf States Marine Fisheries Commission (GSMFC) conducted workshops that reviewed survey methodologies for recreational fisheries and recommended changes or additions to current survey procedures, including standards for quality control (Lazauski 1986; Osborn and Lazauski 1989; GSMFC 1991, 1992; Osborn 1992). The Atlantic States Marine Fisheries Commission (ASMFC) appointed several work groups to review recreational fishery data collection programs in the Atlantic Coast states (Halgren et al. 1988; McGurrin 1990). These recommendations resulted in the development of the RecFIN(SE).

In 1992, the National Marine Fisheries Service (NMFS) initiated a formal cooperative state-federal program to collect and manage recreational fishery statistics in the Region. A strategic planning proposal outlined a strategy and schedule for developing the program and completing a strategic plan (NMFS 1992). The proposed comprehensive program was to include examination of total information needs, including quantifying statistical and measurement goals; coordination or integration of existing data collection programs; development of alternate survey designs, when appropriate, to meet special information needs; and development of a comprehensive data management and retrieval system to provide information to managers.

The planning proposal was presented in April 1992 at meetings of the GSMFC and the ASMFC. The proposal emphasized a cooperative program in conjunction with state and federal fishery management agencies, regional fishery management councils, interstate marine fisheries commissions, and other organizations concerned with marine fishery management. In response to the proposal, an interagency Plan Development Team (PDT, Appendix A) was organized to develop a Memorandum of Understanding (MOU) and draft a strategic plan for the RecFIN(SE). During this process, the PDT had the benefit of work recently conducted on the Pacific Coast to initiate a similar cooperative program between the NMFS, the states of California, Oregon, and Washington, and the Pacific States Marine Fisheries Commission (NMFS undated; PSMFC 1990; NMFS et al. 1991). The MOU confirmed the intent of the signatory agencies to participate in implementing the RecFIN(SE) and was signed by early 1993 (Appendix B).

D. Scope and Constituency

The scope of the RecFIN(SE) includes the Region's recreational fisheries for marine, estuarine, and anadromous species. Where necessary, it may be expanded to include geographical areas outside the Region. Fisheries to be emphasized in the RecFIN(SE) include those subject to fishery management plans developed by program participants. Information that falls within the scope of the RecFIN(SE) includes all forms and types of data collected through fishery-dependent surveys.

The constituency served by the RecFIN(SE) will be state and federal agencies in the Region concerned with conservation and management of marine recreational fisheries. Primary data users will be the MOU signatories that assess stocks, forecast trends, and monitor fishery regulations. These include the NMFS Southeast Fisheries Science Center, state fishery management agencies, fishery management councils and interstate marine fisheries commissions. Also benefiting from the RecFIN(SE) information will be other agencies responsible for the conservation or management of living marine resources in the Region, such as the National Park Service (NPS), U.S. Fish and Wildlife Service (FWS), and NOAA Marine Sanctuaries Program.

The RecFIN(SE) partners are authorized by various federal and state statutes to collect MRF data in accord with their missions to conserve and manage living marine resources.

II. HISTORY AND STATUS OF DATA COLLECTION

Detailed project information prepared by the RecFIN(SE) partners to summarize their current and historic fishery-dependent data collection projects for marine recreational species in the Region is available in a separate document (GSMFC in press).

A. Federal Data Collection Programs

Federal programs for the collection of information on Southeast recreational fisheries started with small, local creel surveys in the 1950s. Long-term surveys began in the mid-1950s.

Fish and Wildlife Service

The major program is a saltwater angling survey conducted every five years since 1955 by the Department of the Interior as part of the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. This survey is ongoing, making it the oldest continuing survey in the Region. The 1991 data collection was completed in March 1992. The survey estimates the number of anglers, hunters, and nonconsumptive recreation participants (those who enjoy photographing, observing, and feeding wildlife) nationwide and in the 50 states, as well as how often they participate and how much money they spend on these activities. Data collected include the number of participants in different types of hunting, fishing, and wildlife-associated recreation activities; days of participation and trips; species hunted and fished; types of expenditures; and selected socioeconomic characteristics of participants. The 1991 survey sampled 128,000 households in an initial telephone screening and subsampled 40,000 anglers and hunters and 28,000 nonconsumptive users for detailed in-person interviews.

National Park Service

Marine recreational fishing surveys conducted by the NPS have been directed at monitoring harvest within national park units. Recreational fishing activity and harvest at the Flamingo marina in Everglades National Park were monitored by the University of Miami, under contract to the NPS, from 1958 to 1968 and by the NPS from 1972 to the present. This survey is probably the oldest localized recreational survey in the Region. Data on catch, effort, and fish length are collected through trip reports by fishing guides and boat launch site interviews of nonguided trips. Boating activity is also estimated from land-based counts of trailers and aerial counts of fishing boats. Biscayne National Park has conducted weekly interviews of fishermen, along with trailer counts, since 1976 to collect data on catch, effort, and fish length.

National Marine Fisheries Service

Since 1971, the NMFS has sampled billfish at major fishing ports in the northern Gulf of Mexico and at Gulf, Atlantic, and Caribbean tournaments. Biological and effort data are collected to monitor billfish population trends and trends in the recreational fishery.

Since 1972, the NMFS has conducted a headboat survey along the South Atlantic Coast. The survey expanded in 1986 to include headboats operating in the northern Gulf of Mexico. The purpose of this survey is to collect data on the number, weight, and size distribution of the catch, along with effort information and biological samples, in order to establish indices of stock status for species of reef fish. Data are obtained by sampling at dockside and occasionally at sea and from logbooks that are now mandatory.

The NMFS conducted a Southeast recreational boating survey in 1972-73 and a regional telephone survey of angling participation in 1975. However, there was no continuous, comprehensive coastwide sampling program of marine recreational fisheries until initiation of the federally funded Marine Recreational Fishery Statistics Survey (MRFSS) in 1979. The MRFSS has been conducted by the NMFS continuously in the South Atlantic and Gulf of Mexico coastal areas since 1979. The survey was conducted in Puerto Rico and the U.S. Virgin Islands from 1979 through 1981 but was discontinued after 1981 due to lack of funds. The MRFSS utilizes a carefully researched survey design of intercept interviews with anglers at fishing sites and telephone interviews with fishing households in coastal counties to produce estimates of total fishing effort and total catch by species. The design permits catch and effort estimates to be calculated for distinct sectors of the recreational fishery. Information produced by the MRFSS is used by stock assessment scientists to estimate population sizes, mortality rates, and other parameters; make allocation decisions; and predict the effects of various management regulations. Short-term supplements to the MRFSS are used to collect information on topics of special interest. For example, in 1991 a supplement collected economic and social information on the reef fish fishery in the Gulf of Mexico. Data on the spiny lobster fishery in the Florida Keys was gathered in 1992. The MRFSS is presently supported by the NMFS Headquarters budget and by certain states, which use internal or federal aid funds to supplement the number of NMFS-supported interviews. Private-sector contractors operate the survey, except in some states where state-employed personnel conduct the intercept interviews through a subcontract. Other federal agencies also may supplement the MRFSS. During 1992, the EPA funded a study through the MRFSS contractor, using the MRFSS sampling frame, to collect information in Alabama and Mississippi on the consumption of fish caught by recreational anglers.

Since 1982, the NMFS has conducted a survey of charterboats operating in both the Gulf of Mexico and off the southern Atlantic states. Catch-effort data are obtained from daily fishing logs submitted by charterboat captains, presently on a voluntary basis. These data are used to estimate relative abundance and distribution of species in the catch. The survey was discontinued briefly in 1988 because of problems with data submission.

In May 1992, the NMFS initiated an expanded survey of the Atlantic bluefin tuna recreational fishery along the Atlantic Coast from North Carolina to Maine. Four independent types of sampling surveys are conducted to obtain catch-effort and biological data on bluefin and other species of tuna, billfish, and sharks. The data are used to generate weekly estimates of the recreational fishing effort directed at large pelagic fishes, as well as the catch of bluefin tuna, in order to monitor the fishery.

The NMFS has been involved in design of surveys of fish consumption by recreational and subsistence fishermen since about 1980. This work includes activities with the U.S. Food and Drug Administration (FDA) and more recently with the U.S. Environmental Protection Agency (EPA). A Saltonstall-Kennedy grant was awarded in 1992 to design survey models and test prototypes in close cooperation with the NMFS, FDA, and EPA. Additionally, a team was brought together in 1992 to examine recreational fish consumption issues and make specific survey recommendations.

B. State Data Collection Programs

Individual states have conducted numerous surveys to provide information for the management of important species within their jurisdictions. Some southeastern states have enhanced the MRFSS by providing funds for increased sampling effort to improve the precision of the catch and effort estimates or to collect specific information for use by state fishery managers.

North Carolina

Starting in 1987, the North Carolina Division of Marine Fisheries modified and expanded the MRFSS survey to collect more detailed data for state management needs. The sample sizes for the intercept and telephone surveys were increased by a factor of four, supplemental questions were added to the interviews, and detailed North Carolina waterbodies were added as data elements. A creel survey of Albemarle Sound and its tributaries was initiated in 1990, in conjunction with aerial boat counts, to estimate effort, catch, and harvest of striped bass and other species. A separate creel survey of several tributaries was also conducted by the North Carolina Wildlife Resources Commission.

South Carolina

Marine recreational data collection by the South Carolina Marine Resources Division began in 1972 with the collection of information on billfish through a cooperative tournament monitoring program with the NMFS; this program is continuing. In 1974 a survey of pier anglers was conducted, and in 1977 there was a one-year effort to collect socioeconomic data on offshore sport fishermen, including private boat owners, charterboat anglers, and headboat fishermen. In 1981, a one-time postcard survey was conducted to collect baseline information on recreational shellfishing, including catch-effort data. An ongoing survey of oceanic pelagic gamefish catches during tournaments was started in 1985. In 1985-86, the feasibility of using

an on-site drop box for survey cards was tested against a roving creel survey for fishery data collection; data collected included target species and catch. During 1985-87, a survey of the recreational fishery for the Cooper River stock of American shad was conducted to assess the impact of the Santee/Cooper rediversion project. The survey utilized boat/angler counts, a creel census, and survey cards. A survey of the recreational shrimp bait fishery was started in 1987. Each year a post-season questionnaire has been utilized to collect data on participation, effort, and catch; develop socioeconomic profiles; and solicit opinions on management of the shrimp bait fishery. In 1987 and 1989, an added creel census provided information on volume of catch, species composition, and size of shrimp.

South Carolina's participation in the MRFSS also began in 1987. At that time, the state modified and expanded the MRFSS to three times the base level. After 2½ years, an evaluation of the survey revealed the small improvement seen in precision at this level did not justify the cost and effort expended. Since that time, South Carolina has adopted a two-tier survey approach. One level is the base MRFSS, the second is a state survey that uses procedures and forms similar to the MRFSS but different site scheduling. In 1988, a one-time supplemental shellfish survey was conducted. A mail survey of the gigging fishery was carried out in 1991 to document catch, effort, and participation. Also in 1991, a short-term intercept survey was conducted of recreational shellfish harvesters to provide data on effort and harvest in some of the most heavily utilized public shellfish grounds. A saltwater fishing stamp requirement went into effect in South Carolina on July 1, 1992. A program also began on July 1 to obtain data on catch, effort, participation, and artificial reef usage from charterboats, headboats, and commercial piers utilizing mandatory daily trip logs submitted on a monthly basis. A pilot survey of private-boat anglers and shellfish harvesters to obtain the same types of data will begin in 1993.

Georgia

During 1985-89, the Georgia Coastal Resources Division participated in the MRFSS in order to increase data collection and improve the statistical validity for state needs. Supplemental data elements included species preference and specific location of trip. In 1990-91, the state conducted its own intercept survey, based on the MRFSS methodology.

Florida

Since 1985, the Florida Game and Fresh Water Fish Commission has conducted peak-season roving creel surveys to estimate harvest, angler effort, and success rates for sport fish in the upper and lower 6 miles of the Apalachicola River. Harvested striped bass and hybrids are measured, and otoliths are collected for age analysis.

The Florida Marine Research Institute (FMRI) of the Department of Natural Resources began a program of angler interviews in 1986 to collect MRF site characteristics, usage, angler, and catch information. Data collected include effort, fishing mode and method, bait usage, angler information, fishing site usage, and site conditions (tide, lunar quarter, weather). Data

collection began in 1990 for a data base that maintains a 10% sample of names and addresses of Florida recreational saltwater fishing license holders. The information is collected from survey cards completed at the time of purchase of general licenses and stamps for certain species. In 1991, a postcard survey of a sample of recreational spiny lobster stamp holders was conducted to assess fishing effort and harvest during August and September. During 1992, an aerial survey of boater utilization of the Florida Keys monitored usage of areas of the Keys by fishermen (recreational and commercial), divers, and other boat-based activities.

Alabama

From 1984 to 1987, the Alabama Marine Resources Division conducted a recreational creel survey of private boats, charter boats, pay piers, and wade/bank anglers. Catch and effort were estimated quarterly and annually down to species level, using a nonuniform probability sampling design.

Mississippi

In 1987, the Mississippi Bureau of Marine Resources started an ongoing creel survey to collect catch, effort, and biological information on the state's recreational fisheries. Anglers were interviewed at stratified, randomly selected boat-access sites. In 1991, sites were expanded to include piers, jetties, and locations of wade fishing. The Bureau began collecting data on the recreational oyster harvest in 1989 to maintain an accurate account of the harvest from specific sites. The information is obtained by requiring fishermen to check in to purchase tags for marking oyster sacks and to check out after a day's fishing to verify the number of sacks retained and provide other data such as gear used and harvest location.

Louisiana

From 1975 to 1977, the Louisiana Department of Wildlife and Fisheries conducted a roving clerk creel survey of boat-based recreational fishermen in lower Barataria Bay. The objectives of the the study were to determine the species composition and seasonal abundance of the catch; effort, harvest and success rates; and the types of baits used by anglers. In 1984, an access point creel survey of recreational saltwater anglers was conducted throughout coastal Louisiana by the Department. Data collected in this study should facilitate management recommendations relative to creel limits, size limits, total population and harvest, as well as special considerations for those species which are most often targeted and retained by recreational fishermen. In 1990 and 1991, the LDWF conducted a project to determine the preferences, expenditures, and demographics of sport anglers in Lousiana. Data generated by this project will be an important part of programs developed by the LDWF for management and conservation of Louisiana's fisheries resources.

Texas

The Coastal Fisheries Branch of the Texas Parks and Wildlife Department began sampling private boats and shore-based anglers in 1974. Private vessels have been surveyed continuously since 1974. Shore angling at wade/bank and lighted pier sites was surveyed from 1974 to 1975, 1979 to 1980, and 1990 to 1991. Surveys of Gulf headboats began in 1980 and were discontinued in 1984; surveys of bay headboats began in 1983 and were discontinued in 1991. Charterboat angling has been surveyed since 1983. All the surveys collect data on species composition, size and number of catch, and catch per unit effort; social and economic elements have been added in recent years. In 1986, an annual mail survey was initiated to determine social and economic characteristics of Texas anglers. During 1991, a study was conducted to determine the characteristics and significance of the nighttime flounder gig fishery. Night interviews were conducted at wade/bank and boat-access sites to estimate effort and catch rates, and to collect social and economic information.

Puerto Rico

The Puerto Rico Department of Natural Resources initiated MRF data collection in 1985 with surveys of big game fishing and shore fishing that continued to 1989. Billfish tournaments were monitored and fishermen interviewed to obtain data on effort; type of bait; location of capture; and length, weight, and sex of catch. Data on catch, effort, and species composition were gathered from shore fishermen utilizing roving creel surveys. Other projects have been carried out through the Sea Grant College Program. These include a 1986-88 assessment of access and infrastructure needs of the marine recreational fishery in Puerto Rico and the U.S. Virgin Islands and a 1987-88 study of the behaviors and preferences of native and tourist fishermen, the attitudes of travel agents, and ways to include small-scale commercial fishermen in the recreational industry. The most recent project, carried out during 1989-92, developed strategies to enhance charterboat operations in Puerto Rico and the U.S. Virgin Islands.

U.S. Virgin Islands

The U.S. Virgin Islands Division of Fish and Wildlife began a recreational fishery survey in 1981 to determine harvest and effort of marine sportfishes. The survey was conducted through intercept interviews, telephone interviews, and tournament sampling. A survey was conducted in 1986 to evaluate the efficiency of phone surveys for obtaining reliable data. Port sampling has also been utilized on St. Croix (1986-87) and on St. Thomas and St. John (1986-89) to determine the effectiveness of fish aggregating devices in attracting pelagic fish species. Port sampling was conducted to determine catch and effort for billfish from 1989-1991. In 1991, two ongoing projects were started that include intercept interviews to obtain catch and effort data on tuna species (in a study to determine the seasonality and feeding habits of tunas and to develop recreational live-bait techniques to harvest yellowfin tuna) and on pelagic sport fish (in a study on the biology of flyingfish and needlefish in relation to their importance as baitfish).

Gulf States Marine Fisheries Commission

In 1979, the GSMFC funded an add-on to the intercept portion of the MRFSS for a survey of recreational shrimpers in the bays and sounds along the Gulf Coast. Data on effort, catch, socioeconomics, and sales were included.

C. Cooperative Programs

Cooperative state-federal programs for collecting and managing fishery information have been operational in the Region since the early 1980s. The Cooperative Statistics Program focuses on commercial fishery-dependent data, while the Southeast Area Monitoring and Assessment Program (SEAMAP) collects fishery-independent data. Other federal programs such as the Marine Fisheries Initiative (MARFIN), as well as special surveys, are used to cooperatively collect statistical information on specific southeastern fisheries. The RecFIN(SE) will use the above models to establish a comprehensive approach to collecting, managing, and disseminating MRF data in the Region.

D. Current Deficiencies

In spite of progress made through individual and cooperative programs, significant deficiencies still exist. Insufficient state and federal funding makes the development and operation of long-term cooperative data collection programs very difficult. Although federal and state management authorities require similar kinds of data on recreational fisheries to fulfill their management missions, different priorities and concerns and different levels of timeliness, precision, or detail are common. For example, some agencies may need information for the entire range of a resource to estimate its population status and ensure that overfishing of the stock is not occurring. Other agencies may give priority to information on a more restricted geographic area to deal with questions concerning local availability. The numerous MRF data collection activities in the Region often have not been coordinated to maximize the usefulness and availability of results.

The major data collection problems that presently exist are (NMFS 1992):

- State and federal data bases are often not compatible or continuous over time or area;
- Duplication and conflicts occur among surveys;
- Improvements in estimation of fishing effort and catch for some sectors of the recreational fishery are needed;
- More precise catch and effort estimates are needed at various geographical levels;

- Significant recreational fisheries for molluscan shellfish and crustaceans are not covered regularly by most surveys;

- Information on highly migratory species and "rare-event" catches is not sufficient to determine the impact of recreational fisheries on the resources;

- Better information on length frequencies and catch-at-age by time/area strata is needed for the level of statistical confidence required by decision makers and the precision required by stock assessment scientists;

- Information about discarded catch and the disposition of landed catch, including consumption, has not been verified or routinely collected;

- The nature and extent of tournament catches are poorly known;

- Social and economic data on recreational fisheries are very limited and, in many cases, nonexistent;

- The ability to access and analyze most recreational fishery survey data bases is severely limited; and

- There is no common forum for concerned agencies in the Southeast to plan, coordinate, and evaluate MRF data collection and management activities.

The RecFIN(SE) will address these deficiencies and others such as lack of funding for the Caribbean by coordinating and integrating diverse state and federal projects and objectives through cooperative planning, innovative uses of statistical theory and design, and consolidation of appropriate data into a useful data base system. Coordination of these activities will provide better data for management decisions, while controlling costs and avoiding duplication of effort.

III. CURRENT INITIATIVES

Measures to improve and expand collection of statistical data on marine recreational fisheries were underway prior to development of this Strategic Plan. Many of the recommendations made in the ASMFC and GSMFC workshops and reports (Lazauski 1986; Halgren et al. 1988; Osborn and Lazauski 1989; McGurrin 1990; GSMFC 1991, 1992; Osborn 1992) have been implemented. As a result, notable improvements in ongoing surveys have been achieved. Improvements in quality control have been made, such as changes in training procedures for MRFSS interviewers, increased instruction in identification of fish species, and closer supervisory control of field personnel. Beginning in 1992, summaries of data from the Texas recreational fishery survey were included in the MRFSS report. Three principal criticisms of the MRFSS are being addressed:

Timeliness. Mackerel catch estimates are now made available within 45 days for review by statistical review panels, compared to 60 days prior to 1987;

Precision. Estimated variances have been reduced by redistributing sampling levels among MRFSS regions and by redistributing sampling effort among fishing modes within the Region. Overall sampling levels of the MRFSS have also been increased. For several years some states, notably North Carolina, have added to the NMFS-supported base number of telephone and intercept interviews in order to improve precision of estimates at the state level. Such additions increase the precision of regional estimates. In 1992, the NMFS increased the sampling level in the Region to 2.5 times the 1990 base level, resulting in a significant improvement in precision of the estimates;

Accessibility. Efforts are continuing to develop computer programs and user-friendly systems to access, download, and use MRFSS data.

The MRFSS is used to gather detailed data on specialized topics, such as sociology, economics, consumption rates of recreational fishermen, and fishing avidity for selected species. The information is obtained by adding questions to the survey instruments or by using the interviewed fishermen or telephone households as sampling frames for follow-up surveys.

Some information needs that are not satisfactorily met by the MRFSS continue to be addressed by special surveys. Efforts continue to make these surveys more responsive to the information needs of fishery managers. For example, in 1992 the large pelagics survey that provides catch estimates of recreationally caught Atlanta bluefin tuna was modified to increase precision and to provide weekly catch estimates so that U.S. quotas for this species could be more closely monitored. Additionally changes have been made in the procedures and timeliness of data processing of the NMFS charterboat and headboat surveys and in a number of state-sponsored surveys.

These changes are examples of ongoing efforts to improve the quality and usefulness of information on recreational fisheries of the Region. The RecFIN(SE) will provide a unifying focus for continued efforts in this direction.

IV. PROGRAM MISSION, GOALS, AND OBJECTIVES

A. Mission Statement

The mission of the RecFIN(SE) is to cooperatively collect, manage, and disseminate MRF statistical data and information for the conservation and management of fishery resources in the Southeast Region and to support the development and operation of a national program.

B. Goals and Objectives

To further the mission of the program, RecFIN(SE) activities will be directed toward the following goals and objectives:

Goal 1: To plan, manage, and evaluate a coordinated state-federal MRF data collection program for the Southeast Region.

Objective 1: To establish a RecFIN(SE) Committee consisting of MOU signatories or their designees to develop, implement, monitor, and evaluate the program.

Objective 2: To complete during the first year a three-year Strategic Plan that outlines policies and protocols of the program.

Objective 3: To develop annual operations plans, including identification of available resources, that implement the Strategic Plan.

Objective 4: To distribute program information to cooperators and interested parties.

Objective 5: To conduct a program review after two years of operation to evaluate the program's success in meeting needs in the Southeast Region.

Goal 2: To implement a coordinated state-federal MRF data collection program for the Southeast Region.

Objective 1: To identify the components of the fishery (modes, areas, etc.) and the required data priorities for each component.

Objective 2: To identify data elements (environmental, biological, sociological, economic) required for each fishery component.

Objective 3: To identify and determine standards for data collection, including statistical, training, and quality assurance and quality control standards.

Objective 4: To identify and evaluate the adequacy of current programs for meeting the RecFIN(SE) requirements.

Objective 5: To coordinate, integrate, and augment, as appropriate, data collection efforts to meet the RecFIN(SE) requirements.

Objective 6: To evaluate and recommend innovative data collection technologies.

Goal 3: To establish and maintain an integrated, centralized MRF data management system for the Southeast Region.

Objective 1: To identify the location and administrative responsibility for a centralized the RecFIN(SE) data management system.

Objective 2: To evaluate the current hardware, software, and communication capabilities of program partners and make recommendations for support and upgrades.

Objective 3: To design, implement, and maintain an MRF data management system to accommodate fishery management/research and other needs (e.g., trade and tourism).

Objective 4: To develop standard protocols and documentation for data formats, input, editing, quality control, storage, access, transfer, dissemination, and application.

Objective 5: To identify and prioritize existing historical data bases for integration into the centralized data base.

Objective 6: To evaluate and recommend innovative, cost-effective information management technologies.

Goal 4: To support the development and operation of a national program to collect, manage, and disseminate MRF information for use by states, territories, councils, interstate commissions, and federal marine fishery management agencies.

Objective 1: To provide for long-term national program planning.

Objective 2: To coordinate the RecFIN(SE) with other regional RecFIN programs.

Objective 3: To encourage consistency and comparability among regional programs over time.

V. PROGRAM OPERATIONS

A. Organizational Structure and Administration

The organizational structure will consist of the RecFIN(SE) Committee, three geographic subcommittees (Caribbean, Gulf, and South Atlantic), ad hoc subcommittees, technical work groups, and administrative support (Figure 1):

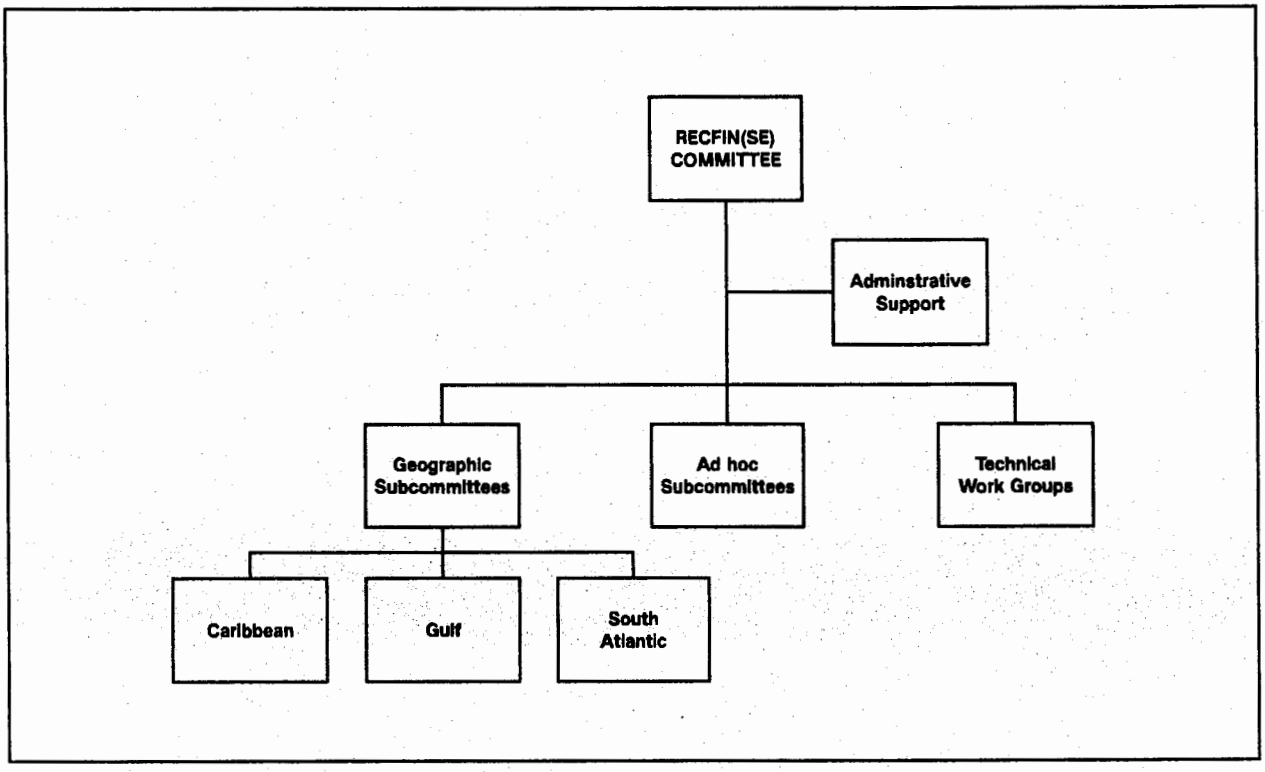


Figure 1. Organizational structure of the RecFIN(SE).

RecFIN(SE) Committee

The RecFIN(SE) Committee consisting of the signatories to the MOU or their designees, will plan, manage, and evaluate the program. Agencies represented by signatories to the MOU are voting members of the Committee:

- National Marine Fisheries Service
- Fish and Wildlife Service
- National Park Service

- Alabama Department of Conservation and Natural Resources
- Florida Department of Natural Resources
- Georgia Department of Natural Resources
- Louisiana Department of Wildlife and Fisheries
- Mississippi Department of Wildlife, Fisheries, and Parks
- North Carolina Department of Environment, Health, and Natural Resources
- Puerto Rico Department of Natural Resources
- South Carolina Wildlife and Marine Resources Department
- Texas Parks and Wildlife Department
- U.S. Virgin Islands Department of Planning and Natural Resources
- Caribbean Fishery Management Council
- Gulf of Mexico Fishery Management Council
- South Atlantic Fishery Management Council
- Atlantic States Marine Fisheries Commission
- Gulf States Marine Fisheries Commission

The Committee will meet as frequently as necessary to carry out its responsibilities. It is anticipated that most decisions of the Committee will be reached by consensus. If consensus cannot be reached, the will of the Committee will be reached by majority vote of a quorum (50 percent of all members plus one) to determine the preferred action. Each member agency of the Committee will have one vote, even if an agency has more than one Committee member.

The duties of the RecFIN(SE) Committee will include but not be limited to:

- Establish and implement program policies;
- Establish program priorities;
- Establish standard operating procedures;
- Establish and disband technical work groups and ad hoc subcommittees;
- Review, approve, and implement annual work plans and other reports;
- Direct the evaluation of the three-year pilot RecFIN(SE);
- Support development of a national RecFIN; and
- Sponsor appropriate forums.

Geographic Subcommittees

The RecFIN(SE) Committee will be divided into three standing subcommittees representing the major geographical areas of the Region: Caribbean, Gulf, and South Atlantic. These subcommittees will be responsible for making recommendations to the Committee on the needs of these areas. Because meetings will involve fewer members and shorter travel distances, subcommittees will be able to meet more frequently, at lower travel costs, to deal with specific subregional and general programmatic issues.

Ad hoc Subcommittees

Ad hoc subcommittees may be established as needed by the RecFIN(SE) Committee to formulate administrative policies, to serve as nominating committees for the RecFIN(SE) chair and other positions, or to address other issues as decided by the RecFIN(SE) Committee. Members of these subcommittees will be members of the RecFIN(SE) Committee.

Technical Work Groups

Technical work groups will be established as needed by the RecFIN(SE) Committee to carry out tasks on specific technical issues. Work groups will be appropriate for accomplishing many of the specific RecFIN(SE) objectives. Each group will be comprised of persons selected by the Committee for their expertise in the specific subject to be addressed and may include members of the RecFIN(SE) Committee, as well as nonmembers.

Work groups will be charged in writing by the RecFIN(SE) Committee with specific tasks and may be disbanded by the Committee when that task is completed. "Standing" work groups may also be authorized by the Committee and be assigned a series of related tasks over a period of time.

Coordination and Administrative Support

Coordination and administrative support of the RecFIN(SE) will be accomplished through administrative structures established in the Caribbean, Gulf of Mexico, and South Atlantic areas. This approach is successfully used by SEAMAP. Major tasks involved in the coordination and administration of the various levels of the RecFIN(SE) include but are not limited to:

- Working closely with the RecFIN(SE) Committee in all aspects of program coordination, administration, and operation;

- Implementing plans and program directives approved by the RecFIN(SE) Committee;

- Providing coordination and logistical support, including communications and organization of meetings for the RecFIN(SE) Committee, subcommittees, and work groups;

- Developing and/or administering cooperative agreements, grants, and contracts;

- Serving as liaison between the RecFIN(SE) Committee, other program participants, and other interested organizations;

- Assisting the RecFIN(SE) Committee in preparation or review of annual spending plans;

- Preparing annual operations plans under the direction of the RecFIN(SE) Committee;

- Preparing and/or supervising and coordinating preparation of selected documents, including written records of all meetings;

- Distributing approved RecFIN(SE) information and data in accordance with accepted policies and procedures as set forth by the RecFIN(SE) Committee;

- Assisting in the identification of regional and geographic needs that can be satisfied through RecFIN(SE) activities; and

- Conducting or participating in other activities as identified.

B. Support Requirements

Resources will be required to support RecFIN(SE) administrative and programmatic functions. Solicited funds and inkind contributions from participating agencies will be used to meet these needs.

Administrative Functions: Funds will be needed for administrative, travel, and meeting expenses for the RecFIN(SE) Committee, geographic subcommittees, ad hoc subcommittees, and technical work groups. The RecFIN(SE) Committee may hold two or three meetings during the first year. The subcommittees and work groups may meet more often. Consulting costs for statisticians and other experts selected to participate on work groups may be necessary.

Programmatic Functions: Ongoing data collection, management, and dissemination activities are agency-funded. Additional funding will be required for new or augmented RecFIN(SE) needs.

C. Planning, Implementation, and Evaluation

The RecFIN(SE) is a comprehensive program comprised of coordinated data collection activities, an integrated data management and retrieval system, and procedures for information dissemination, as outlined in the mission, goals, and objectives of this Strategic Plan. These three program components will be directed by the RecFIN(SE) Committee. Involvement of all program participants in planning and implementation through the RecFIN(SE) Committee, geographical subcommittees, and technical work groups should ensure development of a program strategy that will best meet the fishery management needs of the signatories to the MOU. It is recognized that the needs of individual parties, in some cases, are quite different and that it will be impossible to meet all needs with a common effort. However, by considering the information needs and ongoing surveys of all RecFIN(SE) partners, the present variety of separate data collection and data management activities may be coordinated and/or modified to maximize the return on expenditure of statistical survey monies and the utility of the results.

Implementation of annual operations plans will be the means of accomplishing the goals and objectives of the RecFIN(SE) Strategic Plan. A detailed annual operations plan for each year will present tasks to be accomplished that year and the approaches for their implementation. The data collection, data management, and information dissemination activities for each year will be determined through repeated monitoring, evaluation, and identification of needs (Figure 2).

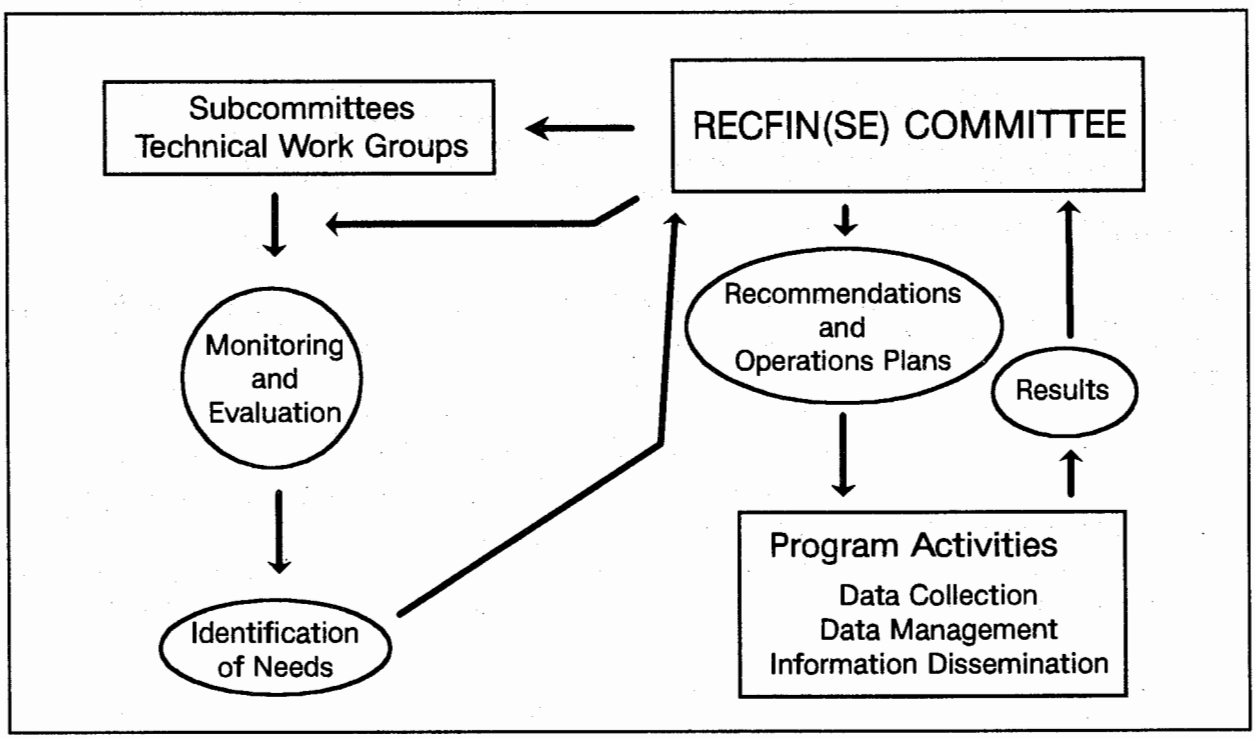


Figure 2. Schematic diagram of the RecFIN(SE) operations process.

This process is described below for each of the three categories of RecFIN(SE) activities.

Data Collection

The steps the RecFIN(SE) participants will take to determine data collection activities will generally include:

- The RecFIN(SE) Committee will charge the subcommittees and/or technical work groups in writing with specific tasks that address data needs and standards. These tasks will include, but will not be limited to: completing an inventory of regional data collection projects, identifying required data elements, identifying data needs and priorities, quantifying statistical and measurement goals, and determining quality assurance/quality control standards;

- Information needs will be compared to existing programs and capabilities to identify gaps in available data;

- Activities necessary to fill identified gaps will be determined. These activities could range from integration with existing data collection projects to development of alternate survey designs; and

- The RecFIN(SE) Committee will periodically review MRF data collection activities accomplished by participating agencies.

Data Management

A comprehensive data management system will be a fundamental component of the RecFIN(SE). This system is envisioned to be an integrated, centralized but also distributed, regional data base for the Region, from which information on marine recreational fisheries is easily and effectively retrievable. Development of the system will be a considerable task that will draw on the experience of the SEAMAP data management system. Communication with the Pacific Coast RecFIN program will also be established and maintained to coordinate with and benefit from its data management efforts and to ensure compatibility with a planned national recreational fisheries data base system. Development of the data management system will be accomplished by technical work groups established by the RecFIN(SE) Committee. Development of the system will generally include the following steps:

- An inventory of existing and historical MRF-dependent data bases in the Region will be completed. The major existing data bases are: 1) MRFSS files; 2) the NMFS Trip Interview Program (TIP) files, which contain biological data on catch, especially length-frequency data, from recreational trips, although most of the information is from commercial trips; and 3) a variety of state data bases. For example, the Texas Parks and Wildlife Recreational Survey files supply catch

and effort estimates for Texas which are not included in the MRFSS. These and other data bases will be identified and prioritized for integration into the centralized RecFIN(SE) data base.

- The data elements and data element definitions of the various data bases will be examined to determine the feasibility of combining them into single or a smaller number of generalized, probably relational, data bases.

- The current hardware, software, and communication capabilities of program partners will be evaluated and recommendations will be made to the RecFIN(SE) Committee for changes and upgrades.

- Standard protocols and documentation, including quality assurance/quality control standards, for data formats, data element definitions, input, editing, storage, access, transfer, dissemination, and application will be developed.

- Responsibility and location for the centralized data base will be determined.

- System requirements and design studies will be conducted.

- A data management system will be implemented and operated in accordance with procedures and specifications identified in the design study.

Information Dissemination

The information dissemination component of the RecFIN(SE) will consist of activities associated with distribution of three types of information. These tasks may be accomplished by any or all of the groups in the RecFIN(SE) organizational structure (Section V.A.)

- Administrative information will document program operations and will include annual work plans; annual reports; reports and/or minutes of the RecFIN(SE) Committee, subcommittee, and technical work group meetings; and reports documenting the results of work group studies.

- Data base information will include data base inventories, data summaries, system requirements, system design reports, and other data base documentation that will provide critical information to users.

- General program information which will be primarily descriptive, will keep the RecFIN(SE) participants and other interested groups informed about relevant events and issues and will generate interest in the program. Means of communication may include informal newsletters, informational articles in newspapers or journals, and presentations to public groups or at technical meetings.

External Review of Pilot Program

By the end of the third year of operation, the RecFIN(SE) Committee will arrange for a formal external review of the program. This review will be a critical evaluation of the effectiveness of the pilot program in achieving the RecFIN(SE) goals and objectives. A written report will be prepared by the review team and presented to all the RecFIN(SE) signatory agencies, with a recommendation on the continuation of the RecFIN(SE).

D. Schedule for Program Implementation

The pilot RecFIN(SE) is a three-year program extending through December 31, 1995. The program began with the signing of the MOU by participating agencies and subsequent designation of representatives to the RecFIN(SE) Committee. Activities during the first full year (1993) will be associated almost entirely with staffing and planning. Some of the specific activities that will occur during the three years of the pilot program are listed below in the approximate order of occurrence.

Year 1

- The RecFIN(SE) Committee will establish written rules and standard operating procedures for its meetings, establish the geographical subcommittees, and complete the Strategic Plan. The RecFIN(SE) Committee will identify tasks to be accomplished and will establish and charge technical work groups or ad hoc subcommittees to begin work on these tasks.

- The RecFIN(SE) Committee will finalize the administrative structures for staffing of the RecFIN(SE).

- The RecFIN(SE) Committee will direct the development of the Operations Plan for Year 1. A schedule for implementing the first year's activities in data collection, data management, and information dissemination will be presented in this plan. The plan will identify the resources available, in terms of funds and personnel, for initial the RecFIN(SE) work.

- The RecFIN(SE) Committee will direct the development of the Operations Plan for Year 2. The Committee will review the activities and accomplishments of Year 1, review findings of technical work groups, and receive recommendations from the geographic subcommittees for activities to be carried out during Year 2 that continue to address the RecFIN(SE) goals and objectives. The RecFIN(SE) Committee will approve the Operations Plan for Year 2 and make recommendations to participants to implement activities based on the Operations Plan, subcommittee recommendations, and available resources.

- The RecFIN(SE) Committee will prepare a proposal(s) for financial assistance or will assist RecFIN(SE) participants in preparing such proposals to support future activities of the RecFIN(SE), based on the Strategic Plan and Operations Plan.

Year 2

- Activities in data collection, data management, and information dissemination will be implemented.

- The RecFIN(SE) Committee will direct the development of the Operations Plan for Year 3. The Committee will review the activities and accomplishments of Year 2, review findings of technical work groups, and receive recommendations from the geographic subcommittees for activities to be carried out during Year 3 that continue to address the RecFIN(SE) goals and objectives. The Committee will approve the Operations Plan for Year 3 and make recommendations to participants to implement activities based on the Operations Plan, subcommittee recommendations, and available resources.

- The RecFIN(SE) Committee will prepare a proposal(s) for financial assistance or will assist RecFIN(SE) participants in preparing such proposals to support future activities of the RecFIN(SE), based on the Strategic Plan and Operations Plan.

- The RecFIN(SE) Committee will begin internal evaluation of the program in preparation for an external review in Year 3.

Year 3

- Activities in data collection, data management, and information dissemination will be implemented.

- An external review team of statistical and managerial experts selected by the RecFIN(SE) Committee will conduct a formal evaluation of the RecFIN(SE) before the end of Year 3 to review accomplishments of the program, recommend future actions to participating agencies, and make a recommendation on continuation of the program to the RecFIN(SE) participants.

VII. REFERENCES

Gulf States Marine Fisheries Commission. 1991. Marine recreational fisheries statistics survey intercept survey standards for quality control. GSMFC Spec. Rep. No. 9-WB. 6 pp.

_____. 1992. Marine recreational fishery data collection and management programs in the Gulf of Mexico region: Identification and resolution of issues. GSMFC Spec. Rep. No. 10-WB. 15 pp. + appendices.

_____. In press. Marine recreational fisheries data collection project summaries. 81 pp.

Halgren, B., J. McGurrin, and ASMFC Marine Recreational Fisheries Committee. 1988. Marine recreational fisheries programs of the Atlantic Coast. ASMFC Spec. Rep. No. 12. 24 pp.

Lazauski, H.G. (ed.). 1986. Proceedings of the statistical symposium: Design, collection, and assessment of angler volunteered information programs. GSMFC No. 14. 25 pp.

McGurrin, J. 1990. Summary findings: Marine recreational fishery statistics survey state/federal workshop. ASMFC. 13 pp.

National Marine Fisheries Service. Undated. Demonstration project for integrating recreational fisheries statistics data collection and dissemination: California and Washington. 18 pp.

_____. 1991. Our living oceans - The first annual report on the status of U.S. living marine resources. NOAA Tech. Memo. NMFS-F/SPO-1. 123 pp.

_____ et al. 1991. Memorandum of understanding between the NMFS, Pacific States Marine Fisheries Commission, California Department of Fish and Game, Oregon Department of Fish and Wildlife, Washington Department of Fisheries, and Washington Department of Wildlife for establishment of a Recreational Fisheries Information Network (RecFIN) for Washington, Oregon, and California.

_____. 1992. A strategy to develop a pilot state/federal cooperative marine recreational fishery statistics program for the southeastern United States. 10 pp.

Osborn, M. (ed.). 1992. Proceedings: Workshop on marine "for-hire" recreational fisheries survey methodology. GSMFC Report. 30 pp.

Osborn, M., and H. Lazauski (eds.). 1989. Proceedings: Workshop on marine recreational fisheries statistics collection in the Gulf of Mexico. GSMFC Spec. Rep. No. 3-WB. 16 pp.

Pacific States Marine Fisheries Commission. 1990. Recreational Fisheries Information Network. 6 pp.

Southeast Fisheries Science Center. 1992. Status of fishery resources off the southeastern United States for 1991. NOAA Tech. Memo. NMFS-SEFSC-306. 75 pp.

APPENDIX A

Members of the RecFIN(SE) Plan Development Team

Mr. Michael Street Mr. Paul Phalen	N.C. Division of Marine Fisheries P.O. Box 769 Morehead City, NC 28557-0769 (Street address: 3441 Arendell Street) (919) 726-7021; FAX (919) 726-6062
Mr. David Cupka Mr. Wayne Waltz	S.C. Wildlife and Marine Resources Department P.O. Box 12559 Charleston, SC 29422-2559 (Street address: 217 Fort Johnson Road) (803) 762-5010 (Cupka); 762-5094 (Waltz) FAX (803) 762-5001
Ms. Susan Shipman	Georgia Coastal Resources Division 1 Conservation Way Brunswick, GA 31523-8600 (912) 264-7218; FAX (912) 262-2350
Mr. Joseph O'Hop	Florida Department of Natural Resources Marine Research Institute 100 Eighth Avenue, SE St. Petersburg, FL 33701-5095 (813) 896-8626; FAX (813) 823-0166
Dr. Henry "Skip" Lazauski	Alabama Department of Conservation and Natural Resources Marine Resources Division P.O. Drawer 458 Gulf Shores, AL 36547-0458 (Street address: 21055 Mildred Casey Drive) (205) 968-7576; FAX (205) 968-7307
Mr. Tom Van Devender	Mississippi Bureau of Marine Resources 2620 West Beach Boulevard Biloxi, MS 39531-4501 (601) 385-5860; FAX (601) 385-5864
Mr. Joseph Shepard	Louisiana Department of Wildlife and Fisheries P.O. Box 98000 Baton Rouge, LA 70898-9000 (Street address: 2000 Quail Drive) (504) 765-2371; FAX (504) 765-2489
Dr. Ted Storck	Texas Parks and Wildlife Department 100 Navigation Circle Rockport, TX 78382 (512) 729-2328; FAX (512) 729-1437
Mr. William "Toby" Tobias	Virgin Islands Division of Fish and Wildlife Lagoon Street Complex, Room 203 Frederikstead, VI 00840 (809) 772-1955; FAX (809) 772-3227

Ms. Ann Seiler	Virgin Islands Division of Fish and Wildlife 101 Estate Nazareth St. Thomas, VI 00802 (809) 775-6762; FAX (809) 775-3972
Mr. Walter Padilla	Puerto Rico Department of Natural Resources P.O. Box 3665, Marina Station Mayaguez, PR 00681-3665 (Street address: Road 102, Kilometer 8.6 Interior, Cabo Rojo, PR 00623) (809) 833-2025; FAX (809) 833-2410
Ms. C. Dianne Stephan	Atlantic States Marine Fisheries Commission 1776 Massachusetts Ave., NW, Suite 600 Washington, DC 20036 (202) 452-8700; FAX (202) 452-9110
Mr. Ronald Lukens Mr. David Donaldson	Gulf States Marine Fisheries Commission P.O. Box 726 Ocean Springs, MS 39564-0726 (Street address: 2404 Government Street) (601) 875-5912; FAX (601) 875-6604
Ms. Jane DiCosimo	South Atlantic Fishery Management Council 1 Southpark Circle, #306 Charleston, SC 29407-4699 (803) 571-4366; FAX (803) 769-4520
Mr. Steve Atran	Gulf of Mexico Fishery Management Council 5401 W. Kennedy Blvd., #331 Tampa, FL 33609-2486 (813) 228-2815; FAX (813) 225-7015
Mr. Stephen Meyers	Caribbean Fishery Management Council Suite 1108, Banco de Ponce Building Hato Rey, PR 00918-2577 (809) 766-5926; FAX (809) 766-6239
Dr. R. Wilson Laney	U.S. Fish and Wildlife Service South Atlantic Fisheries Coordination Office P.O. Box 33683 Raleigh, NC 27636-3683 (Street address: 4116 Gardner Hall, North Carolina State University Campus, Raleigh 27695) (919) 515-5019; FAX (919) 515-5327
Mr. Thomas Schmidt Mr. Dewitt Smith	South Florida Research Center Everglades National Park P.O. Box 279 Homestead, FL 33030 (Street address: 12 mi SW of Homestead on SR 9336) (305) 242-7800; FAX (305) 242-7836

Mr. Paul Ocker	Biscayne National Park P.O. Box 1369 Homestead, FL 33090 (Street address: 9700 S.W. 328th Street) (305) 247-2044; FAX (305) 247-2045
Mr. Ronald Schmied	National Marine Fisheries Service Southeast Regional Office 9450 Koger Boulevard St. Petersburg, FL 33702-2432 (813) 893-3144; FAX (813) 893-3111
Dr. Albert Jones Ms. Carole Goodyear	National Marine Fisheries Service Southeast Fisheries Science Center 75 Virginia Beach Drive Miami, FL 33149-1003 (305) 361-4259 (Jones); 361-4410 (Goodyear) FAX (305) 361-4219
Mr. Ken Savastano	National Marine Fisheries Service Stennis Space Center Building 1103, Room 218 SSC, MS 39529-6000 (601) 688-3103; FAX (601) 688-1151
Dr. John Witzig Ms. Maury Osborn	National Marine Fisheries Service 1335 East West Highway, F/RE1 Silver Spring, MD 20910-3225 (301) 713-2328; FAX (301) 588-4967
Ms. Nikki Bane	National Marine Fisheries Service 1335 East West Highway, F/PC Silver Spring, MD 20910-3235 (301) 713-2239; FAX (301) 713-2299

APPENDIX B

RecFIN(SE) Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

BETWEEN

NATIONAL MARINE FISHERIES SERVICE
FISH AND WILDLIFE SERVICE
NATIONAL PARK SERVICE
ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
FLORIDA DEPARTMENT OF NATURAL RESOURCES
GEORGIA DEPARTMENT OF NATURAL RESOURCES
LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES
MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
PUERTO RICO DEPARTMENT OF NATURAL RESOURCES
SOUTH CAROLINA WILDLIFE AND MARINE RESOURCES DEPARTMENT
TEXAS PARKS AND WILDLIFE DEPARTMENT
U.S. VIRGIN ISLANDS DEPARTMENT OF PLANNING AND NATURAL RESOURCES
CARIBBEAN FISHERY MANAGEMENT COUNCIL
GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
GULF STATES MARINE FISHERIES COMMISSION
ATLANTIC STATES MARINE FISHERIES COMMISSION

FOR
ESTABLISHMENT OF A
RECREATIONAL FISHERIES INFORMATION NETWORK
FOR THE SOUTHEASTERN UNITED STATES
RecFIN(SE)

PREAMBLE

This Memorandum of Understanding (MOU) confirms the intent of the National Marine Fisheries Service (NMFS); the Fish and Wildlife Service (FWS); the National Park Service (NPS); the Atlantic States and Gulf States Marine Fisheries Commissions; the Caribbean, Gulf of Mexico, and South Atlantic Fishery Management Councils; and the marine fishery management agencies of the states and territories in the Southeast Region[1] of the United States to develop and implement a cooperative program to collect and manage marine recreational fishery (MRF) statistics. This MOU recognizes the long-standing cooperation and partnership existing among these organizations in management of and research on the Region's living marine resources and their habitat.

The signatures of senior agency officials on this MOU in no way obligate the signatory agencies to provide personnel or funds for planning and implementation of the RecFIN(SE) program.

Statistical data and information are necessary to achieve optimal benefits from the use of fishery resources and to reduce the risk of overharvesting. Development of a cooperative MRF statistics program among state, territory, and federal partners can avoid duplication of effort, reduce overall costs, promote education of resource users, and provide a more complete base of information for formulating management policies, strategies, and tactics.

BACKGROUND

Need for Information

Catch and effort statistics are fundamental for assessing the effects of fishing on stocks of living marine resources. Information on total catch, fishing effort, and seasonal and geographical distribution of the catch and effort is required to develop rational management policies and plans. Accurate and timely catch statistics, along with associated biological and socioeconomic data, are required to provide management agencies with the information necessary to plan for the wise use of fishery resources. Statistics are needed by management agencies for assessing the status of stocks and developing and monitoring fishery management plans.

State and territory fishery management agencies and federal agencies with local authority (e.g., the NPS) have long managed the fishery resources within their respective jurisdictions. Recreational and commercial catch and effort statistics have been of fundamental importance to these agencies in assessing the influence of fishing and making decisions on appropriate management measures to maintain and enhance fishery resources. In 1976 the Magnuson Fishery Conservation and Management Act (MFCMA) created regional fishery management

[1]The Southeast Region (the Region) includes the states of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Texas, and the territories of Puerto Rico and the U.S. Virgin Islands.

councils and greatly increased the involvement of state, territory, and federal agencies in the conservation and management of fishery resources. The MFCMA mandates a national fishery management program and directs that fishery management plans (FMPs) be prepared by regional councils or the NMFS for resources that are in the U.S. Exclusive Economic Zone. Through their member states, congressionally established interstate fisheries commissions prepare FMPs for interjurisdictional fishery resources which occur either partially or entirely in territorial waters. States and territories also prepare FMPs for fishery resources within their jurisdictions. Consideration of both commercial and recreational harvests is a significant component of all these FMPs.

The major fishery resources of the southeastern United States require interjurisdictional management because of their transboundary distributions. Stocks of fish routinely cross interjurisdictional boundaries, and anglers and other harvesters cross these same boundaries in pursuit of their prey. Because of these movements, information on fisheries in one jurisdiction's waters is useful to adjacent jurisdictions. Adequate information about fishing and other resource uses is also needed by state, territorial, and local government agencies to determine the biological and economic impacts of land and water use decisions.

Inseason regulatory changes and catch quotas have become common fishery management strategies. Timely, accurate and precise harvest information for both recreational and commercial fisheries is required to determine the need for and effects of these management measures.

Historical Programs

Individual management agencies have conducted numerous statistical surveys over the years to provide information for the management of fisheries within their jurisdictions. Programs to collect statistical information on marine recreational fisheries began in the 1950s with local creel surveys and were followed by saltwater angling surveys conducted every five years (1960 to the present) by the U.S. Department of the Interior through its National Survey of Hunting, Fishing, and Associated Outdoor Recreational Activities. Since 1979 the NMFS has conducted a Marine Recreational Fishery Statistical Survey (MRFSS), which produces annual estimates of total fishing effort and catch by species. Management agencies have conducted numerous other surveys, either as enhancements to the MRFSS or as independent surveys.

Data Deficiencies

In response to the recent increase in fishery management information requirements, management agencies in the Southeast have recognized the need to improve their MRF data collection programs. Cooperative efforts to identify specific problems have revealed the following major deficiencies:

1. State, territorial, and federal data bases are not always compatible or continuous over time or area;

2. Some duplication and field sampling conflicts may still be occurring among different surveys;

3. Improvements in the estimation of fishing effort and catch for some sectors of the recreational fishery are needed;

4. More precise catch and effort estimates are needed at various geographical levels;

5. Significant recreational fisheries for molluscan shellfish and crustaceans are not covered regularly by most surveys;

6. Information on highly migratory species and "rare-event" catches is not sufficient to determine the impact of recreational fisheries on the resources;

7. Better information on length frequencies and catch-at-age by time/area strata is needed for the level of statistical confidence required by decision makers and the precision required by stock assessment scientists;

8. Information about discarded catch and the disposition of landed catch, including consumption, has not been verified or routinely collected;

9. The nature and extent of tournament catches are poorly known;

10. Social and economic data on recreational fisheries are very limited and, in many cases, nonexistent;

11. The ability to access and analyze most recreational fishery survey data bases is severely limited; and

12. There is no common forum for concerned agencies in the Southeast to plan, coordinate, and evaluate MRF data collection and management activities.

PURPOSE

Having determined that there is an urgent and compelling need for statistical data on marine recreational fisheries of the southeastern United States, and recognizing that the NMFS, the states of California, Oregon, and Washington, and the Pacific States Marine Fisheries Commission have already entered into a similar cooperative effort, the signatories to this MOU confirm their intent to establish a cooperative state-federal southeastern Recreational Fisheries Information Network - RecFIN(SE). The RecFIN(SE) program is intended to coordinate present and future MRF data collection and data management activities through cooperative planning, innovative uses of statistical theory and design, and consolidation of appropriate data into a useful data base system.

AUTHORITY

Authorization of the parties to this MOU to collect data for use in marine fishery resource management includes the following statutes:

National Marine Fisheries Service:

- Under the MFCMA (16 U.S.C. 1801 et seq.), the NMFS is required to consider the effects of commercial and recreational fishing activities on marine fishery resources in the development of FMPs. Development and implementation of FMPs require the NMFS to use the best scientific information available.

- The Fish and Wildlife Act of 1956 (16 U.S.C., Sect. 753a et seq.) provides for the collection and dissemination of statistics on commercial and sport fisheries.

- The Migratory Game Fish Study Act of 1959 [16 U.S.C. 760(e)] provides for a continuing study of migratory marine fishes, including the effects of fishing on the species.

- The National Environmental Policy Act (NEPA) and other laws and directives (Regulatory Flexibility Act and E.O. 12291) delineate federal analytical responsibilities for assessing the impact of fishing activities.

- The NMFS Strategic Plan (1992-96) details specific goals and objectives referring to the need for collection of MRF statistics.

Fish and Wildlife Service:

- The FWS conducts national surveys of fishing primarily under the authority of the Federal Aid in Sport Fish Restoration Act (16 U.S.C. 777-777k, the Dingell-Johnson, or D-J, Act). The D-J Act was expanded in 1984 by Public Law (P.L.) 98-369 (98 Stat. 1015), referred to as the Wallop-Breaux Amendment.

- The FWS also is authorized to collect data under the authority of the Fish and Wildlife Coordination Act of 1956 (U.S.C. 742d-f) and the NEPA.

National Park Service:

- Under the National Park Service Organic Act of 1916, the NPS is charged with the management of the parks to "...conserve the scenery and the natural and historic objects and wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for enjoyment of future generations."

- The General Authorities Act of 1970 defines the National Park System as including all the areas administrated by the NPS "...for park, monument, historic, parkway, recreational, or other purposes" and declares that all units in the System will be managed in accordance with their respective individual directives, in addition to the Congressional direction found in the Organic Act, providing the legislation does not conflict with specific provisions.

Atlantic States Marine Fisheries Commission:

- The Atlantic States Marine Fisheries Compact (P.L. 77-539) provides for a regional approach to improve utilization and prevent waste of the marine and estuarine fisheries resources of the Atlantic Coast.

- The Interjurisdictional Fisheries Act (P.L. 99-659) provides authorization for the interstate compacts to develop interstate fishery management plans.

- The Atlantic Striped Bass Conservation Act (P.L. 98-613 and amendments) gives the Commission management authority for Atlantic striped bass in state waters.

Gulf States Marine Fisheries Commission:

- The Gulf States Marine Fisheries Compact (P.L. 81-66) provides for a regional approach to management, monitoring, and utilization of marine fisheries resources.

- The Interjurisdictional Fisheries Act (P.L. 99-659) provides authorization for the interstate compacts to develop interstate fishery management plans.

Caribbean, Gulf, and South Atlantic Fishery Management Councils:

- The MFCMA (16 U.S.C. 1801 et seq.) requires the fishery management councils to develop FMPs according to national standards, including use of the best available scientific information. Each council, through the FMPs, can require the submission of fishery statistics by fishermen and processors (16 U.S.C. 1853).

Alabama:

- Code of Alabama Department of Conservation and Natural Resources, Title 9, Subsection 2-4, Subheading (a), provides the Department with full jurisdiction and control of all resources existing or living in the waters of Alabama.

Florida:

- Florida Statute 370.02 directs the Department of Natural Resources to secure and maintain statistical records of the catch of marine species by various gear, by areas and other appropriate classifications.

- Florida Statute 370.0607 directs the Department to establish a marine information system in conjunction with the licensing program to gather marine fisheries data.

Georgia:

- Georgia Code Section 27-1-3(a) declares all wildlife of the state to be within the custody of the Department of Natural Resources for purposes of management and regulation.

- Georgia Code Section 27-1-3(b) authorizes Department of Natural Resources employees to check creels for adherence to daily limits and size limits.

- Georgia Code Section 27-1-6(3) confers upon the Department of Natural Resources the power to enter into cooperative agreements with educational institutions and state, federal, and other agencies to promote wildlife management, conservation, and research.

Louisiana:

- Louisiana Revised Statute 56:6(6) confers upon the Louisiana Department of Wildlife and Fisheries the authority to collect, classify, and preserve such data and information as will tend to conserve and protect marine resources.

Mississippi:

- Mississippi Department of Wildlife, Fisheries and Parks Ordinance 9.002, Sections 3 and 8, directs the Department to obtain statistical information on recreational fisheries landed or processed in the State of Mississippi.

North Carolina:

- North Carolina General Statute (GS) 113-131 charges the Department of Environment, Health, and Natural Resources with stewardship over the state's marine and estuarine fishery resources.

- Research and collection of statistics are authorized by GS 113-181.

Puerto Rico:

- Act Number 23 of June 20, 1972, as amended (known as the Department of Natural Resources Organic Act), and Act Number 83 of May 13, 1936, as amended (known as the Puerto Rico Fisheries Act), confer upon the Department of Natural Resources authority over the natural resources of Puerto Rico and the aquatic resources within jurisdictional waters of the Commonwealth of Puerto Rico.

South Carolina:

- South Carolina Code Section 50-5-20 gives the Division of Marine Resources jurisdiction over all salt-water fish, fishing and fisheries, all fish, fishing and fisheries in all tidal waters of the state and all fish, fishing and fisheries in all water of the state whereupon a tax or license is levied for use for commercial purposes.

- Section 50-17-280 requires license and permit holders (including the recreational shrimp baiting fishery) to keep records and provide information.

- Section 50-20-40 (effective July 1, 1992) requires charter boats, rental boats, and commercial piers to provide catch, effort, and participation data.

Texas:

- Code of Texas Parks and Wildlife Department, Sections 66.217, 76.302, and 77.004 direct the Department to conduct continuous research and study of the supply, economic value, environment and reproductive characteristics of finfish, shrimp and oysters.

U.S. Virgin Islands:

- U.S.V.I. Code, Title 12, Section 303-326 (Act 3330), authorizes the Department of Planning and Natural Resources with jurisdiction and control of all marine resources.

PROPOSED PROGRAM

The mission, goals, and objectives of RecFIN(SE) are preliminary and may be refined as the Strategic Plan and operations plans are completed.

Mission

The mission of the RecFIN(SE) program is to cooperatively collect, manage, and disseminate MRF statistical data and information for the conservation and management of fishery resources in the Southeast Region and to support the development and operation of a national program.

Goals and Objectives

GOAL 1: To plan, manage, and evaluate a coordinated state-federal MRF data collection program for the Southeast Region.

- OBJECTIVE 1: To establish a RecFIN(SE) Committee consisting of MOU signatories or their designees to develop, implement, monitor, and evaluate the program.
- OBJECTIVE 2: To complete during the first year a three-year Strategic Plan that outlines policies and protocols of the program.
- OBJECTIVE 3: To develop annual operations plans, including identification of available resources, that implement the Strategic Plan.
- OBJECTIVE 4: To distribute program information to cooperators and interested parties.
- OBJECTIVE 5: To conduct a program review after two years of operation to evaluate the program's success in meeting needs in the Southeast Region.

GOAL 2: To implement a coordinated state-federal MRF data collection program for the Southeast Region.

- OBJECTIVE 1: To identify the components of the fishery (modes, areas, etc.) and the required data priorities for each component.
- OBJECTIVE 2: To identify data elements (environmental, biological, sociological, economic) required for each fishery component.
- OBJECTIVE 3: To identify and determine standards for data collection, including statistical, training, and quality assurance and quality control standards.
- OBJECTIVE 4: To identify and evaluate the adequacy of current programs for meeting RecFIN(SE) requirements.
- OBJECTIVE 5: To coordinate, integrate, and augment, as appropriate, data collection efforts to meet RecFIN(SE) requirements.
- OBJECTIVE 6: To evaluate and recommend innovative data collection technologies.

GOAL 3: To establish and maintain an integrated, centralized MRF data management system for the Southeast Region.

OBJECTIVE 1: To identify the location and administrative responsibility for a centralized RecFIN(SE) data management system.

OBJECTIVE 2: To evaluate the current hardware, software, and communication capabilities of program partners and make recommendations for support and upgrades.

OBJECTIVE 3: To design, implement, and maintain an MRF data management system to accommodate fishery management/research and other needs (e.g., trade and tourism).

OBJECTIVE 4: To develop standard protocols and documentation for data formats, input, editing, quality control, storage, access, transfer, dissemination, and application.

OBJECTIVE 5: To identify and prioritize existing historical databases for integration into the centralized database.

OBJECTIVE 6: To evaluate and recommend innovative, cost-effective information management technologies.

GOAL 4: To support the development and operation of a national program to collect, manage, and disseminate MRF information for use by states, territories, councils, interstate commissions, and federal marine fishery management agencies.

OBJECTIVE 1: To provide for long-term national program planning.

OBJECTIVE 2: To coordinate RecFIN(SE) with other regional RecFIN programs.

OBJECTIVE 3: To encourage consistency and comparability among regional programs over time.

IMPLEMENTATION

Participants in this MOU recognize the critical need for a comprehensive program to collect and manage MRF data in the Southeast Region. Participants acknowledge that existing resources to achieve program goals are inadequate. Participants also agree on the appropriateness of cooperative agreements and grants (Financial Assistance Awards) and/or contracts to fund

approved projects, subject to the availability of funds and in accordance with applicable agency administrative policies and procedures.

It is hereby agreed that the undersigned will establish and implement the RecFIN(SE) program in accordance with its mission, goals, and objectives, contingent upon available resources. This agreement will become effective with an agency upon signature of the authorized official of that agency. As a pilot program, this MOU is effective through December 31, 1995, unless extended by agreement of the participants.

The terms of the agreement may be modified at any time by mutual agreement of the participants, including the provision for the RecFIN(SE) Committee to extend invitations to other agencies with fishery management or research authority to become participants in the program. Further, it is agreed that any signatory to this MOU may terminate its involvement upon 90-days written notice to the other signatories.

OTHER PROVISIONS

Nothing herein is intended to conflict with current state, territory, council, commission, Department of the Interior, or Department of Commerce regulations, policies or directives. If the terms of this MOU are inconsistent with existing practices of a participant entering into this MOU, then those portions of this MOU which are determined to be inconsistent shall be invalid; however, the remaining terms and conditions of this MOU shall remain in full force and in effect. Such changes as are deemed necessary will be accomplished by either an amendment to this MOU or by entering into a new MOU, as determined by the pertinent participants.

Should an unresolvable disagreement arise at the operating level regarding the interpretation of provisions of this MOU, the area(s) of disagreement shall be reduced to writing by the participants involved and presented to the other RecFIN(SE) participants for consideration at least 30 days prior to forwarding the issue to higher administrative levels for resolution.