

FRAMEWORK PLAN

for

the Fisheries Information Network
(FIN)

By: FIN Committee

Gulf States Marine Fisheries Commission

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EXECUTIVE SUMMARY

The Fisheries Information Network (FIN) establishes a state-federal cooperative program to collect, manage, and disseminate statistical data and information on the commercial and recreational fisheries of the Southeast Region.¹ There are two separate programs under the FIN: the Commercial Fisheries Information Network (ComFIN) and the Southeast Recreational Fisheries Information Network [RecFIN(SE)].

This Framework Plan is the result of combined efforts of program partners which include states and territories of the Region, the National Marine Fisheries Service (NMFS), 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 commercial and recreational fisheries and the differing roles and responsibilities of the agencies involved. Many southeastern stocks targeted by commercial and recreational users are now depleted, due primarily to excessive harvest and 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 commercial and recreational fishery data in the Region began in the mid to late 1980s. In 1992, the NMFS 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. In 1994, the NMFS initiated a formal process to develop a cooperative State/Federal program to collect and manage commercial fishery statistics in the Region. A concept paper outlined a strategy and schedule for developing the program and completing a strategic plan (Brown 1994). It 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. Due to previous work and NMFS action, the Southeast Cooperative Statistics Committee (SCSC) developed a MOU and a Framework Plan for the ComFIN. During the development of the ComFIN MOU, the SCSC, in conjunction with the RecFIN(SE) Committee, decided to combine the MOU to incorporate the RecFIN(SE). The combined MOU creates the Fisheries Information Network (FIN) which is composed of both the ComFIN and RecFIN(SE). The MOU confirmed the intent of the signatory agencies to participate in implementing the ComFIN and RecFIN(SE).

¹The 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.

The scope of the FIN includes the Region's commercial and 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 commercial and recreational fishermen and the associated fishing industries, but the resources, the states, and the nation.

A variety of commercial and 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;
- @ duplication of effort;
- @ inadequate precision and accuracy of estimates;
- @ lack of shellfish data; and
- @ insufficient social and economic data.

The mission of the ComFIN is to cooperatively collect, manage, and disseminate marine commercial and anadromous fishery data and information for the conservation and management of fishery resources in the Region and to support the development of an inter-regional program. The four goals of the ComFIN include:

- @ plan, manage, and evaluate a cooperative commercial fishery data collection program;
- @ implementing a State/Federal marine commercial fishery data collection program;
- @ establish and maintain integrated commercial fishery data management system; and
- @ support for the development of an inter-regional program.

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:

- @ plan, manage, and evaluate marine recreational fisheries (MRF) data collection and management activities;
- @ implement data collection activities;
- @ establish and maintain a MRF data management system; and
- @ support for the establishment of a national program.

To carry out the ComFIN and RecFIN(SE) mission, an organizational structure has been created which includes the FIN, ComFIN, and RecFIN(SE) Committee; South Atlantic, Caribbean, and Gulf

Subcommittees; various other subcommittees and working groups; and administrative and coordination support.

I. INTRODUCTION

A. Purpose of Strategic Plan

This document presents a Framework Plan for a marine commercial and recreational fishery statistics program for the Southeast Region of the United States: the Fisheries Information Network (FIN). Under this program, there are two distinct programs: the Commercial Fisheries Information Network (ComFIN) and the Southeast Recreational Fisheries Information Network [RecFIN(SE)]. The FIN is a cooperative effort among agencies that are legally mandated to manage marine commercial and recreational fisheries resources. These agencies need to plan and effect programs to collect, manage, and disseminate statistical data and information on the Region's commercial and recreational fisheries. The goal of the FIN is to provide sound scientific information on catch, effort, and participation that managers need to prudently conserve and manage marine commercial and recreational fisheries 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 Framework Plan is a combined effort of state² and federal agencies. It was developed under the premise that a cooperative statistics program for marine commercial and 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 ComFIN and RecFIN(SE) missions, goals, and objectives and broadly describes how these programs will be organized, operated, managed, and funded. This Framework Plan will be implemented through detailed, annual operations plans.

B. Need for the FIN

Commercial fisheries are extremely important in the Region. In 1994, commercial landings were 2.4 billion pounds valued at \$1.02 billion (ex-vessel). Because of the Region's productive marine fishery resource base, commercial landings in the Southeast (excluding the Caribbean) account for about 23% of the nation's total commercial harvest (NMFS, 1995).

Recreational fisheries are also very important to the Region. In 1994, recreational anglers in the Region took an estimated 37 million fishing trips and caught approximately 216 million fish. 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 63% of the nation's total sportfishing effort and 65% of the recreational catch in numbers of fish (NMFS 1995). 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,

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

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 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 commercial and recreational fishing opportunities to their constituents.

Many southeastern stocks targeted by the commercial and recreational sector 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 geographic 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 consistent 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 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.

Thus, initiation of a comprehensive program to cooperatively collect and manage statistics on marine commercial and 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 marine commercial and recreational fisheries statistics.

C. Evolution of the FIN

Recreational Fisheries Information Network for the Southeastern U.S. [RecFIN(SE)]

In the 1980s, state and federal fishery managers in the Region 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; McGurrian 1990). The resulting recommendations led to the development of the RecFIN(SE).

In 1992, the National Marine Fisheries Service (NMFS), encouraged by the recommendations from the states through the ASMFC and GSMFC, 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) was organized to develop a Memorandum of Understanding (MOU) and draft a strategic plan for the RecFIN(SE)(RecFIN(SE) Committee 1993). 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.

Commercial Fisheries Information Network (ComFIN)

In the 1990s, state and federal fishery managers in the Region agreed there was an urgent and compelling need for increased coordination of the collection and management of data on the marine commercial fisheries resources, and recommendations were made through a series of workshops and meetings. In particular, during 1991, the GSMFC Data Management Subcommittee began to review the collection and management of commercial fisheries statistics and information. Their conclusion was that a formal review of all such programs should take place in an effort to design an integrated program to satisfy data and information needs to manage fisheries. As an initial step, a MOU and Framework Plan were developed for the state-federal Cooperative Statistics Program (CSP). These documents established the Southeast Cooperative Statistics Committee (SCSC) which was charged with planning, managing and evaluating the CSP. In addition, a workshop that presented existing commercial fishery statistics programs generated a series of recommendations concerning marine commercial fisheries programs (GSMFC 1994). Those recommendations resulted in a proposal for the development of the ComFIN.

In 1994, the NMFS initiated a formal process to develop a cooperative state-federal program to collect and manage commercial fishery statistics in the Region. A concept paper outlined a strategy and schedule for developing the program and completing a strategic plan (Brown 1994). 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 concept paper was distributed to agency directors for their review. It 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. Due to previous work and NMFS action, the SCSC developed a MOU and a draft framework plan for the ComFIN. During this process, the SCSC had the benefit of the work recently conducted in the Region to initiate a cooperative program regarding marine recreational fisheries [RecFIN(SE)] as well as their own work regarding the development of a MOU and Framework Plan for the Cooperative Statistics Program (NMFS et al. 1993; RecFIN(SE) Committee 1993; NMFS et al. 1994; SCSC 1994). During the development of the ComFIN MOU, the SCSC, in conjunction with the RecFIN(SE) Committee, decided to combine the MOU to

incorporate the RecFIN(SE). The joint MOU creates the FIN which is composed of both the ComFIN and RecFIN(SE). The MOU confirmed the intent of the signatory agencies to participate in implementing the ComFIN and RecFIN(SE)(Appendix A).

D. Scope and Constituency

The scope of the FIN includes the Region's commercial and recreational fisheries for marine, estuarine, and anadromous species with attention to both short- and long-term fishery information needs. Where necessary, it may be expanded to include geographical areas outside the Region. Information that falls within the scope of the FIN includes all forms and types of data collected through fishery-dependent surveys.

The constituency served by the FIN are state and federal agencies in the Region concerned with conservation and management of marine commercial and 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 ComFIN and 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 FIN partners are authorized by various federal and state statutes to collect marine commercial and recreational fisheries 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) Committee which summarize their current and historic fishery-dependent data collection projects for marine recreational species in the Region, is available in a separate document (GSMFC 1993).

A. Federal Data Collection Programs

The collection of statistics for commercial fishing in the United States began in the late 1800s under the auspices of the Bureau of Commercial Fisheries. These early statistics were comprised mostly of monthly landings for broad market categories of marine and some freshwater species.

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.

U.S. Fish and Wildlife Service

The major FWS 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

In Biscayne National Park, Florida, initial base funding was provided in 1976 for commercial data collection activities. This funding was used to collect inshore bait shrimp statistics from commercial fisheries operating in southern Biscayne Bay within park boundaries. Commercially harvested shellfish (other than shrimp and stone crab) data were collected by a park service port sampler base on a voluntary reporting system. In 1983, a port sampler was hired to provide additional data coverage for specific target species to include headboats fishing on the reef tract. In 1985, the funding was reduced and commercial data collection activities were discontinued. Currently, NMFS port agents collect data from local seafood dealers, however, no specific information on catch, effort, and size for individual trips from commercial fishermen operating within park boundaries are available.

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. Fishermen landings and visual census surveys of fish traps in the nearshore waters surrounding St. Johns, Virgin Islands National Park and Buck Island National Monument have been conducted periodically since 1982.

National Marine Fisheries Service

Regarding commercial data collection, the concept of cooperative data collection and/or statistical programs was discussed and outlined by the NMFS in the late 1970s. Between 1981 and 1984, formal cooperative agreements were agreed to and signed by the NMFS and all states in the Region. The U.S. Congress appropriated \$1.7 million to support the collection of basic fishery statistics in the Region through the state-federal CSP.

With this additional funding, two statistics program components were added to the existing monthly landings and Gulf shrimp statistics components. In the South Atlantic region, a program to collect shrimp landings and effort data for individual trips was implemented. The second program consisted of on-site interviews by trained fishery reporting specialists (port agents) to collect fishing effort and location information, species identification and length-weight measurements for individual fish.

The CSP consists of three types of fisheries statistics (four distinct program components) - monthly landing statistics, shrimp statistics for individual fishing trips (separate components in the South Atlantic and Gulf of Mexico), and biostatistical data (also known as the Trip Interview Program or TIP). The data collection activities that are performed by state personnel are described in Section B that follows. The NMFS personnel collect detailed shrimp statistics in the Gulf of Mexico, except for parts of Alabama and Mississippi, and monthly landings statistics in parts of these two states. The NMFS personnel also collect bioprofile data in Texas, and Florida.

Regarding recreational data collection, the NMFS has sampled billfish at major fishing ports in the northern Gulf of Mexico and at Gulf, Atlantic, and Caribbean tournaments since 1971. 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 coast wide 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

Cooperative commercial data collection activities began in North Carolina in 1978. Data collection programs included monthly landings, detailed shrimp, and TIP. Sampling was conducted using standard NMFS procedures and was based on voluntary reporting by seafood dealers. In 1982, TIP was no longer funded by the CSP. North Carolina continued to collect biostatistical data under other funding and makes it available upon request. In early 1993, detailed shrimp data collection stopped due to funding restrictions, and TIP data collection ended late in 1993 for the same reason. Starting January 1994, North Carolina implemented a trip ticket system with mandatory reporting.

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

Commercial shrimp data collection began in 1977, and collection of general canvass data began in 1982. Mandatory monthly dealer reporting has been required since 1982, as well. In lieu of these reports, dealers can participate in daily ticket systems for shrimp and finfish. TIP was included in the CSP beginning in 1984. Mandatory daily reporting of shellfish by area harvested began in 1987. In 1988, the second of two consecutive budget cuts forced the removal of TIP from the cooperative agreement, but other sources of revenue allowed bioprofile sampling to continue. In 1990, all data collection activities in South Carolina were evaluated and modified, including implementation of a weekly summary shrimp ticket, a weekly summary shellfish report, and a complete overhaul of in-house data management programming. TIP was reinstated to the South Carolina cooperative agreement in 1992 as a result of a funding add-on. Since 1977, all data collected by South Carolina

have been key entered and edited in-house before transmission to the Southeast Fisheries Science Center (SEFSC).

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 mail survey of saltwater stamp holders was conducted in 1994 to obtain effort and harvest information on recreational shellfishing and solicit angler opinions on various topics.

Georgia

In Georgia, cooperative data collection was phased in from 1978 to 1982. By 1984, Georgia collected monthly general canvass landings statistics, detailed shrimp statistics for individual trips, assisted with TIP data collection (a NMFS agent in Georgia spearheaded the collection of TIP data), and processed their annual commercial trawlers license computer files. In 1987 and 1988 the funding was reduced due to NMFS funding cuts. Georgia absorbed the funding cuts by dropping TIP assistance, eliminating certain administrative commitments (notably the publication of monthly

statistical bulletins) and subsidizing salaries of administrative staff assigned with the cooperative agreements. Supplemental funding increases from NMFS in 1993 and 1994 allowed Georgia to provide benefits to the project port agents and promote them from hourly to salaried positions. In addition, Georgia agreed to take on full responsibility for TIP data collection, the annual Processed Products Survey, the annual Vessel Operating Units and Shore/Boat Survey, an annual write-up for the Trends and Conditions Report and provide assistance with Federal Fishery Quota Monitoring.

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

In 1984, funding was increased to help subsidize the development of the trip ticket system, as well as employing port agents in West Palm Beach and the upper Keys. These two agents collected size frequency data for specific target species. In 1986, the funding for the agent in West Palm Beach was eliminated, and the SEFSC employed a full-time agent in that area. The 1987 and 1988 budget cuts reduced the funding to Florida, resulting in the elimination of cuts, TIP data collection from the agreement. However, Florida continued to collect size frequency data as part of other research projects. In 1989 and 1990, additional funds were available from the NMFS, which were used to continue the TIP data collection in the Keys.

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 marine recreational fisheries (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

Partial year funding for commercial data collection went to Alabama in both 1982 and 1983, and the total base funding of \$89,200 was in place in 1984. Under this agreement, Alabama provided port agents for all of the state except the Bayou La Batre area which is covered by a NMFS port agent. The Alabama port agents collected general canvass, detailed shrimp and TIP for their respective areas. In 1987 the funding was reduced to \$85,600 and further reduced to \$80,200 in 1988. Alabama continues to provide data collection coverage for all of the state except Bayou La Batre, and absorbed these cuts by subsidizing administrative and other staff costs.

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

Partial year funding for commercial data collection went to Mississippi in both 1982 and 1983, and the total base funding was in place in 1984. Under these agreements, Mississippi provided port agents in Harrison and Hancock Counties, and the SEFSC had an agent to cover Jackson County. The port agents collected all three types of statistics, as described above, for their respective areas. In addition, Mississippi agents also collected size frequency data for state-managed species, such as mullet, black drum and seatrout. In 1987 and 1988 funding was reduced due to NMFS budget cuts. Mississippi continues to provide data collection coverage for the original two counties, and absorbed the cuts by subsidizing some of the indirect costs and reducing the amount of size frequency data that are collected for state-managed species.

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 two years of data were collected from wade fishing locations. The State 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

The agreement to collect commercial data with Louisiana from 1983-1992 sub-contracted data collection to Louisiana State University, Center for Wetland Resources. In 1984 funding was increased to include bioprofile data from federally-managed species (mackerels and reef fishes), state-managed species (black drum, mullet, seatrout) and commercial inshore shrimp statistics. This same array of statistics was included in the 1985/1986 agreement. However, the 1986/1987 agreement was modified, and the collection of inshore shrimp statistics was dropped from the

agreement. In 1987 and 1988 funding was reduced, which resulted in part-time employment of several of the port samplers. Supplemental funds in 1989 and 1990 were used to increase the amount of TIP data that were collected. Beginning in 1993, Louisiana provided state personnel to obtain this data.

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 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 Louisiana. 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

Texas has collected commercial statistics since 1936. Formal cooperative data collection activities with the NMFS began in 1985. Texas provides monthly landings and value statistics for commercially harvested fish and shellfish (other than shrimp) that are landed and sold within the state. Shrimp statistics are collected by the NMFS, and the two agencies exchange the data. The Texas Parks and Wildlife Department (TPWD) data collection does not include individual trip information such as effort. In 1986, the agreement funding was increased, and these funds were used by TPWD to assist in the development and implementation of a coast wide dockside commercial vessel intercept program. In 1988, the funding was reduced and only covered 9 months (July 1988 through March 1989). In 1990, funds were further reduced. Texas continues to provide monthly landings statistics, but the commercial intercept program was discontinued in March 1991.

The Coastal Fisheries Division 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 were included during 1987-1991. 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

Initial funding for part of 1982 and 1983 was provided to Puerto Rico for commercial data collection activities. In 1983 the base funding was supplemented to collect billfish statistics from recreational fishing in Puerto Rico. This funding included 5 port agents to collect statistics from the commercial fisheries via their trip ticket system and an additional 2 agents to collect billfish statistics. Bioprofile data from reef fish, spiny lobster and oceanic pelagic species were collected by the port agents. In 1984 the funding was reduced and by 1985 the supplemental funding was eliminated. Because of these reductions, billfish data collection was discontinued. In 1986 the funding was again reduced, but data collection was supplemented by federal funding under the PL 88-309 program. In 1989 the cooperative statistics funding was further reduced due to budget cuts. During the past several years, the funding support has been provided by federal grants from the Inter-jurisdictional Fisheries Program.

The Puerto Rico Department of Natural Resources initiated marine recreational fisheries 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

In 1982-1983, partial funding for commercial data collection was used to hire two port agents for St. Thomas and St. John Islands. The agents collected bioprofile data from reef fishes and spiny lobsters. Under this agreement, the U.S. Virgin Islands also provided annual landings statistics from their annual license renewal reporting requirements. A small amount of this funding was allocated to collect billfish statistics from the recreational fishery. In 1983, the funding was increased, and both the billfish and bioprofile data collection programs were expanded. In 1984, the funding was reduced to the base amount, and the billfish data collection was eliminated. The cooperative statistics funding was supplemented in 1987, but funding had to be reduced in 1988 due to two NMFS budget cuts. Base funding was provided for the 1990/1991 agreement. Because of Hurricane Hugo and the devastation to the Islands, data collection had to be suspended and funding was not provided for this period. Beginning in 1991, monthly landing reports and trip interviews have been provided.

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 CSP 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 ComFIN and RecFIN(SE) will use the above models to establish a comprehensive approach to collecting, managing, and disseminating marine commercial and recreational fisheries 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 commercial and 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 marine commercial and recreational fisheries 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 commercial and recreational fisheries 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 commercial and 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 commercial and recreational fisheries are very limited and, in many cases, nonexistent”;
- @ “The ability to access and analyze commercial and 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 marine commercial and recreational fisheries data collection and management activities”.

The ComFIN and 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 commercial and recreational fisheries were underway prior to development of this Framework 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; GSMFC 1994) have been implemented. As a result, notable improvements in ongoing surveys have been achieved. Improvements in the organizational structure of the CSP have been made, such as development of the SCSC, Framework Plan and annual operations plans for the CSP as well as improvements in quality control, 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.

A. Marine Recreational Fisheries Statistics Survey

The MRFSS continues to improve. Specific improvements from 1993-1995 include:

Cleanup of historical data. The MRFSS staff completed a major effort to correct remaining errors in data sets produced by the 1981-1995 MRFSS telephone and intercept surveys. Using methods developed for the 1993 MRFSS contract, corrections were made to telephone survey data errors in the accounting of total number of residential households and total sampled non-fishing households by county; as well as intercept survey data errors related to species codes, length/weight relationships, accounting of group catches, and other illogical or out-of-range variable values. The data corrections had relatively minor effects on the state level estimates of effort and finfish catches.

Imputation for missing data. Imputation substitutes data for sampled fishing households in cases where some or all of the trip information was not collected. Although proxy data are collected whenever possible, there are still circumstances where a household is identified as a fishing household, but household fishing data is either incomplete or unobtainable. In previous years missing telephone data was ignored. "Hot deck" imputation procedures were developed and used to revise 1981-1995 MRFSS telephone survey data. This eliminates biases caused by the incomplete counting of angler trips in households contacted by the telephone survey. Imputation of missing effort data increases fishing effort estimates, hence it also increases the finfish catch estimates. Thus far, the extent of this increase in estimated trips appears to be about 5%, but it varies by year, state, wave, and mode.

Telephone Survey Sample Weighting. The MRFSS Telephone Survey sample of households in each state is distributed among coastal counties in accordance with the distribution of the square roots of the county populations of residential households. This sampling method ensures a minimal level of sampling in coastal counties with small populations. The old estimation methodology did not take this weighting of the sample size into account when

calculating trip estimates. This resulted in less populated counties receiving proportionally more weight than heavily populated counties in the estimation of the mean trips per household for the coastal zone of the state. The mean trip estimates are now properly weighted by the number of households in the county prior to calculation of a state level estimate of the mean household fishing effort. This new weighting procedure was applied to 1981-1995 corrected and imputed telephone survey data sets and corrected intercept survey data sets to produce revised effort and catch estimates for all MRFSS survey years. Effort estimates generated with this weighting method are more accurate than those produced with the old method. Subsequent catch estimates, which depend on those effort estimates, are also more accurate. The extent of the differences between new and old estimates of fishing effort and finfish catches varies by year, state, wave and mode. In many strata the difference between "new" and "old" method estimates is minimal. In general, "new" estimates differ most from "old" estimates in states where the coastal counties differ greatly in population size and the large and small population counties differ greatly in household fishing effort.

Home Page with Data Access. The MRFSS staff developed a World Wide Web home page which allows interactive access to Marine Recreational Fisheries Statistics Survey (MRFSS) and automatic downloading of data as well as MRFSS documents. Access to trade data bases and historical commercial monthly landings data bases is also available. The interactive access allows users to fill in selected parameters for customized queries of catch, effort, and participation data bases. Data are available down to the cell level of resolution (year, state or subregion, fishing mode, fishing area, species). Summarized query data is returned in table or ASCII file format.

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. In 1994, an economic survey was conducted in the Northeast Region as an add-on to the MRFSS to provide data for random utility demand and participation models. In 1996, baseline economic questions were added to the intercept questions and questions on recreational shellfishing participation in the Southeast Region and subsistence fishing in the Northeast Region were added to the telephone questionnaire.

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 - 1996 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.

B. Atlantic Coastal Cooperative Statistics Program

A MOU for an Atlantic Coastal Cooperative Statistics Program (ACCSP) was entered into by the fifteen Atlantic coast states, the District of Columbia, the Potomac River Fisheries Commission, the Atlantic States Marine Fisheries Commission, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service in November 1995. The intent of the MOU is to design and implement a cooperative state-federal marine and coastal fisheries statistics program that adequately meets the needs of fishery managers, scientists, and fishermen. The ACCSP will be addressing similar problems being examined by the RecFIN and ComFIN of the Southeast Region, and will coordinate efforts to ensure continuity and comparability of data across regional boundaries.

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

IV. PROGRAM MISSION, GOALS, AND OBJECTIVES

A. Fisheries Information Network

Mission Statement

The mission of the FIN is to provide a forum for discussion and resolution of issues and activities which affect both commercial and recreational fisheries data programs. The FIN provides a unifying focus for fishery-dependent data collection and management activities in the Region. While the FIN will focus on fishery-dependent data the program will coordinate and communicate with existing and future fishery-independent data collection programs.

ComFIN

Mission Statement

The mission of the ComFIN is to cooperatively collect, manage, and disseminate marine commercial and anadromous fishery data and information for the conservation and management of fishery resources in the Region and to support the development of an inter-regional program.

Goals and Objectives

Goal 1: To plan, manage and evaluate a coordinated State/Federal marine commercial fishery data collection program for the Region.

Objective 1 To establish and maintain a ComFIN Committee consisting of MOU signatories or their designees to develop, implement, monitor and evaluate the program.

Objective 2 To develop and periodically review a Framework Plan that outlines policies and protocol of the program

Objective 3 To develop annual operation plans, including identification of available resources, that implement the Framework Plan.

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

Objective 5 To conduct a program review at least every five years of operation to evaluate the program's success in meeting needs in the Region.

Goal 2: To implement and maintain a coordinated State/Federal marine commercial fishery data collection program for the Region.

Objective 1 To characterize and periodically review the commercial fisheries and identify the required data priorities for each.

Objective 2 To identify and periodically review environmental, biological, social and economic data elements required for each fishery.

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

Objective 4 To identify and evaluate the adequacy of current programs for meeting ComFIN requirements.

Objective 5 To coordinate, integrate and augment, as appropriate, data collection efforts to meet ComFIN requirements.

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

Goal 3: To establish and maintain an integrated, marine commercial fishery data management system for the Region.

Objective 1 To periodically review and make recommendations regarding the location and administrative responsibility for the ComFIN data management system.

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

Objective 3 To implement, maintain, and periodically review a marine commercial fishery data management system to accommodate fishery management/research and other needs.

Objective 4 To develop, maintain, and periodically review standard protocols and documentation for data formats, inputs, editing, storage, access, transfer dissemination, and application.

Objective 5 To identify and prioritize historical databases for integration into the marine commercial fisheries database.

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

Objective 7 To protect the confidentiality of personal and business information, as required by state and/or federal law.

Goal 4: To support the development and operation of an inter-regional program to collect, manage and disseminate marine commercial fisheries information for use by states, territories, councils, interstate commissions and federal marine fishery management agencies.

Objective 1 To provide for long-term inter-regional program planning.

Objective 2 To coordinate ComFIN with other regional and national marine commercial fisheries programs.

Objective 3 To encourage consistency and comparability among regional and national marine commercial fisheries programs over time.

RecFIN(SE)

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 Region and to support the development and operation of a national program.

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 Region.

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

Objective 2: To develop and periodically review a Framework Plan that outlines policies and protocols of the program.

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

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

Objective 5: To conduct a program review at least every five years of operation to evaluate the program's success in meeting needs in the Region.

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

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

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

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

Objective 4: To periodically review 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, MRF data management system for the Region.

Objective 1: To periodically review and make recommendations regarding the location and administrative responsibility for the RecFIN(SE) data management system.

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

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

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

Objective 5: To identify and prioritize data bases for integration into the MRF data management system.

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

Objective 7: To protect the confidentiality of personal and business information, as required by state and/or federal law.

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 and national MRF programs.

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

V. PROGRAM OPERATIONS

A. Organizational Structure and Administration

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

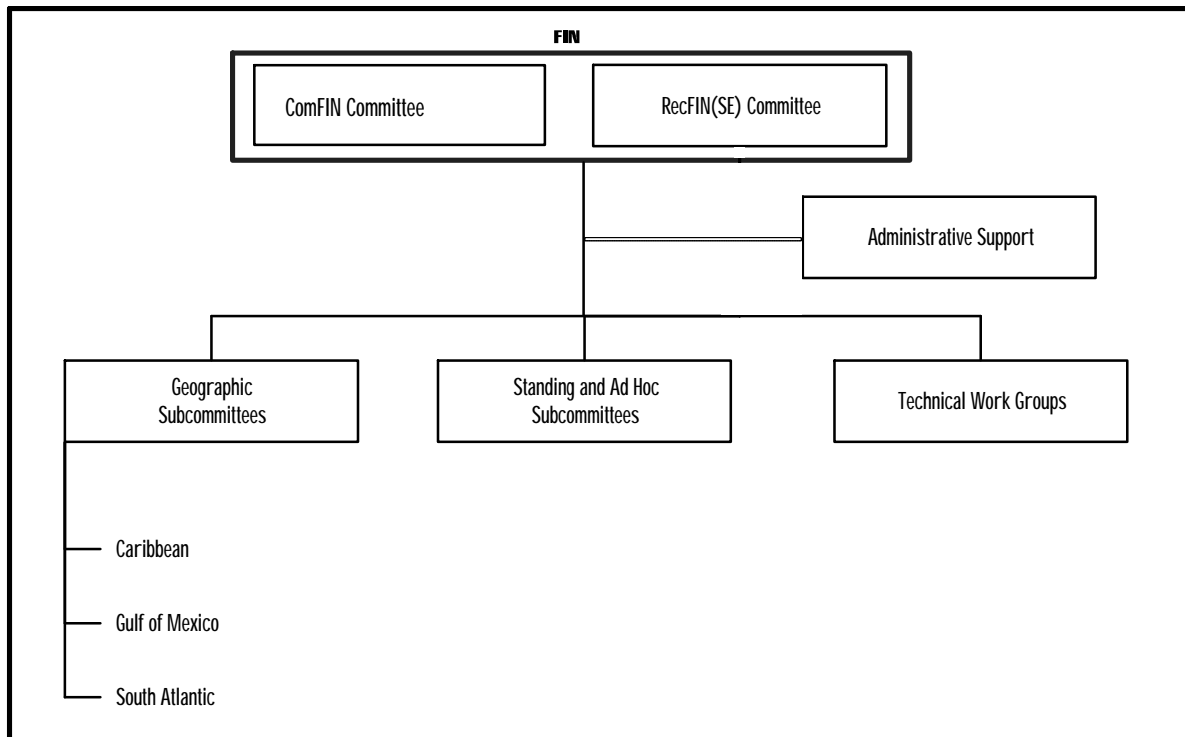


Figure 1. Organizational structure of the ComFIN and RecFIN(SE).

FIN Committee

The FIN Committee consists of the signatories to the MOU or their designees and will include all members of the ComFIN and RecFIN(SE) Committees. The ComFIN and RecFIN(SE) Committees will develop recommendations and discuss issues and other activities that will not need the approval of the FIN Committee. The FIN was established to provide a forum for discussion and resolution of issues and activities which affect both commercial and recreational fisheries data programs. 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 Environmental Protection
- @ Georgia Department of Natural Resources
- @ Louisiana Department of Wildlife and Fisheries
- @ Mississippi Department of Marine Resources
- @ North Carolina Department of Environment, Health, and Natural Resources
- @ Puerto Rico Department of Environmental and Natural Resources
- @ South Carolina Department of Natural Resources
- @ 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

Recognizing the considerable overlap of issues and areas of interest between the ComFIN and RecFIN(SE) Committees, the FIN was established to provide a common forum for discussion and resolution of these issues and activities. The FIN provides a unifying focus for fishery-dependent data collection and management activities in the Region.

Under the FIN Committee, there will be two separate and unique programs. The ComFIN will address issues and problems related to marine commercial fisheries data collection while the RecFIN(SE) will address topics and problems regarding marine recreational fisheries data collection.

ComFIN and RecFIN(SE) Committee

The ComFIN and RecFIN(SE) Committees will meet as frequently as necessary at least annually to carry out their responsibilities. It is anticipated that most decisions of these Committees will be reached by consensus. If consensus cannot be reached, the will of the Committees will be expressed by majority vote of a quorum (2/3 of all members) 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 ComFIN and RecFIN(SE) Committees will include but not be limited to:

- @ Establish and implement program policies, priorities, and 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 program;
- @ Support development of national commercial and recreational cooperative data collection programs; and
- @ Sponsor appropriate forums.

Geographic Subcommittees

The ComFIN and RecFIN(SE) Committees will be each 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 Committees on the needs of these areas. Because meetings will involve fewer members and shorter travel distances, subcommittees may be able to meet more frequently, at lower travel costs, to deal with specific subregional and general programmatic issues.

Standing and Ad Hoc Subcommittees

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

Technical Work Groups

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

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

Coordination and Administrative Support

Coordination and administrative support of the FIN, ComFIN, and RecFIN(SE) will be accomplished through the GSMFC. All participants will be consulted concerning administrative and coordination issues. Major tasks involved in the coordination and administration of the various levels of the FIN, ComFIN, and RecFIN(SE) include but are not limited to:

- @ Working closely with the Committees in all aspects of program coordination, administration, and operation;
- @ Implementing plans and program directives approved by the Committees;
- @ Providing coordination and logistical support, including communications and organization of meetings for the Committees, subcommittees, and work groups;
- @ Developing and/or administering cooperative agreements, grants, and contracts;
- @ Serving as liaison between the Committees, other program participants, and other interested organizations;
- @ Assisting the Committees in preparation or review of annual spending plans;
- @ Preparing annual operations plans under the direction of the Committees;
- @ Preparing and/or supervising and coordinating preparation of selected documents, including written records of all meetings;
- @ Distributing approved ComFIN and RecFIN(SE) information and data in accordance with accepted policies and procedures as set forth by the Committees;
- @ Assisting in the identification of regional and geographic needs that can be satisfied through ComFIN and RecFIN(SE) activities; and
- @ Conducting or participating in other activities as identified.

B. Support Requirements

Resources will be required to support ComFIN and 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 FIN, ComFIN, and RecFIN(SE) Committees, geographic subcommittees, standing and ad hoc subcommittees, and technical work groups. 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 to maintain current levels

of the CSP (South Atlantic Statistics Committee, 1992) and MRFSS activities as well as for new or augmented ComFIN and RecFIN needs.

C. Planning, Implementation, and Evaluation

The ComFIN and RecFIN(SE) are comprehensive programs 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 Framework Plan. These three program components will be directed by the ComFIN and RecFIN(SE) Committees. Involvement of all program participants in planning and implementation through the FIN, ComFIN and 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 ComFIN and 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 this Framework 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). In addition, the ComFIN and RecFIN(SE) will interact with outside users of the data in various activities and issues (Figure 3).

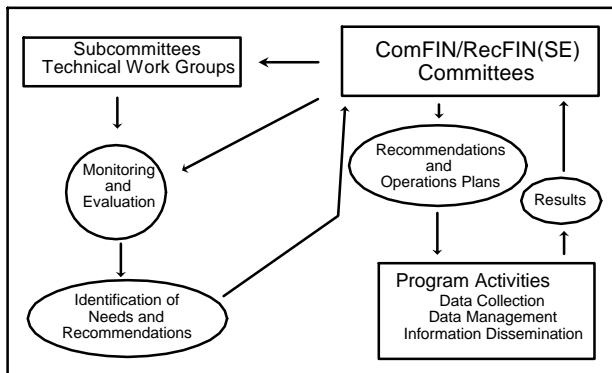


Figure 2. Schematic diagram of the ComFIN and RecFIN(SE) internal operations process.

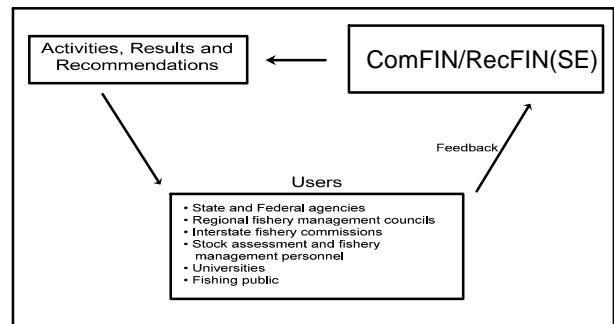


Figure 3. Schematic diagram of the ComFIN and RecFIN(SE) external operations process.

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

Data Collection

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

- @ The Committees 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: maintaining an inventory of regional data collection projects, identifying and maintaining 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 Committees will periodically review marine commercial and recreational fisheries data collection activities accomplished by participating agencies.

Data Management

A comprehensive data management system will be a fundamental component of the ComFIN and RecFIN(SE). Separate systems will be developed for ComFIN and RecFIN(SE). These systems are envisioned to be integrated and distributed from which information on marine commercial and recreational fisheries is easily and effectively retrievable. Communication with the Pacific and Atlantic coasts will also be established and maintained to coordinate with and benefit from its data management efforts and to ensure compatibility with a planned national commercial and recreational fisheries data base system. Development of the data management systems will be accomplished by technical work groups established by agency staff and the ComFIN and RecFIN(SE) Committees. Development of the system will generally include the following steps:

- @ An inventory of existing and historical fisheries-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; 3) NMFS Headboat Survey; and 4) a variety of state and federal 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.

- @ 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 hardware, software, and communication capabilities of program partners will be evaluated and recommendations will be made to the ComFIN and RecFIN(SE) Committees 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 ComFIN and RecFIN(SE) data bases will be placed with the appropriate agency.
- @ System requirements and design studies will be conducted.
- @ Data management systems will be implemented and operated in accordance with procedures and specifications identified in the design studies.

Information Dissemination

The information dissemination component of the ComFIN and 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 ComFIN and RecFIN(SE) organizational structure.

- @ Administrative information will document program operations and will include annual work plans; annual reports; reports and/or minutes of the FIN, ComFIN, and RecFIN(SE) Committees, 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 ComFIN and 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 the Program

At the end of each fifth year of operation or early, the ComFIN and RecFIN(SE) Committees will arrange for a formal external review of the program. This review will be a critical evaluation of the effectiveness of the program in achieving the its respective goals and objectives. A written report will be prepared by the review team and presented to all the FIN signatory agencies, with recommendations for the improvements of the ComFIN and RecFIN(SE).

VII. REFERENCES

- Brown, B. 1994. Commercial Fisheries Information Network (ComFIN). A State/Federal statistics program for the Southeast Region into the 21st century. A discussion paper. Southeast Fisheries Science Center. 14 pp + appendices.
- 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.
- Gulf States Marine Fisheries Commission. 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.
- Gulf States Marine Fisheries Commission. 1993. Marine recreational fisheries data collection project summaries. 81 pp.
- Gulf States Marine Fisheries Commission. 1994. The Commercial Fisheries Information Network (ComFIN). GSMFC Report No. 12-WB. 34 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.
- National Marine Fisheries Service. 1991. U.S. living marine resources. NOAA Tech. Memo. NMFS-F/SPO-1. 123 pp.
- National Marine Fisheries Service, et al. 1991. The Memorandum of understanding between 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.
- National Marine Fisheries Service. 1992. A strategy to develop a pilot state/federal cooperative marine recreational fishery statistics program for the southeastern United States. 10 pp.

National Marine Fisheries Service et al. 1993. Memorandum of understanding between the NMFS, Fish and Wildlife Service, National Park Service, Alabama Department of Conservation and Natural Resources, Florida Department of Environmental Protection, 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 Department of Natural Resources, Texas Parks and Wildlife Department, U.S. Virgin Islands Department of Planning and Natural Resources, Atlantic States Marine Fisheries Commission, Gulf States Marine Fisheries Commission, Caribbean Fishery Management Council, Gulf of Mexico Fishery Management Council, and South Atlantic Fishery Management Council for establishment of a Recreational Fisheries Information Network [RecFIN(SE)] for the Southeastern United States.

National Marine Fisheries Service et al. 1994. Memorandum of understanding between the NMFS, Alabama Department of Conservation and Natural Resources, Florida Department of Environmental Protection, 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 Department of Natural Resources, Texas Parks and Wildlife Department, U.S. Virgin Islands Department of Planning and Natural Resources, Atlantic States Marine Fisheries Commission, Gulf States Marine Fisheries Commission, Caribbean Fishery Management Council, Gulf of Mexico Fishery Management Council, and South Atlantic Fishery Management Council for establishment of an organizational structure for the Southeast Cooperative Statistics Program.

National Marine Fisheries Service. 1995. Fisheries of the United States, 1994. 113 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.

RecFIN(SE) Committee. 1993. Strategic Plan -- Recreational Fisheries Information Network for the southeastern United States RecFIN(SE). GSMFC and ASMFC. 28 pp. + appendices.

South Atlantic Statistic Committee. 1992. Report concerning the funding status for the State/Federal Cooperative Commercial Statistics Program. Atlantic States Marine Fisheries Commission. 2 pp. + attachments.

Southeast Cooperative Statistics Committee. 1994. Framework Plan -- Cooperative Statistics Program for the southeastern United States (CSP). GSMFC. 16 pp. + appendix.

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.

**Fisheries Information Network
Memorandum of Understanding**

MEMORANDUM OF UNDERSTANDING

AMONG

NATIONAL MARINE FISHERIES SERVICE

FISH AND WILDLIFE SERVICE

NATIONAL PARK SERVICE

ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

GEORGIA DEPARTMENT OF NATURAL RESOURCES

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES

PUERTO RICO DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

TEXAS PARKS AND WILDLIFE DEPARTMENT

U.S. VIRGIN ISLANDS DEPARTMENT OF PLANNING AND NATURAL RESOURCES

ATLANTIC STATES MARINE FISHERIES COMMISSION

GULF STATES MARINE FISHERIES COMMISSION

CARIBBEAN FISHERY MANAGEMENT COUNCIL

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

FOR
ESTABLISHMENT OF A
FISHERIES INFORMATION NETWORK
FOR THE SOUTHEASTERN UNITED STATES
(FIN)

APRIL 1996

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 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 Region³ of the United States to develop and implement a cooperative program to collect and manage marine commercial and recreational fishery 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 habitats.

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 Fisheries Information Network (FIN).

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 commercial and recreational fisheries 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, social, and economic 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 fundamentally important to these agencies in assessing the influence of fishing and making decisions on appropriate management measures to

³The Southeast Region (the Region) includes Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Texas, and the U.S. Virgin Islands.

maintain and enhance fishery resources. In 1976 the Magnuson Fishery Conservation and Management Act (MFCMA) created regional fishery management 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 marine fisheries commissions prepare FMPs for fishery resources which occur either partially or entirely in interstate jurisdictional 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 commercial and recreational fishermen, and other harvesters cross these same boundaries in pursuit of those resources. Because of these movements, information on fisheries in one jurisdiction 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. The collection of statistics for commercial fishing in the United States began in the late 1800s under the auspices of the Bureau of Commercial Fisheries. These early statistics were comprised mostly of monthly landings for broad market categories of marine and some freshwater species. In the mid-1950s, a program was initiated to collect detailed data on the amount and value of shrimp landings by species and size for individual fishing trips in the Gulf of Mexico. In the late 1970s, the concept of cooperative data collection programs was discussed and between 1981 and 1984, formal agreements were signed by the NMFS and all states, commonwealths and territories in the Region to collect and manage commercial fishery statistics.

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 the 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 Region have recognized the need to improve their marine commercial and recreational fisheries data collection programs. Cooperative efforts to identify specific problems have revealed the following major deficiencies:

- @ State, territorial, and federal data bases are not always compatible or continuous over time or area;
- @ Some duplication and field sampling conflicts may still be occurring among different surveys;
- @ Improvements in the estimation of fishing effort and catch for some sectors of the commercial and recreational fishery are needed;
- @ 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 commercial and recreational fisheries on the resources;
- @ 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;
- @ More precise catch and effort estimates are needed at various geographical levels;
- @ 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;
- @ Social and economic data on commercial and recreational fisheries are very limited and, in many cases, nonexistent;
- @ The ability to access and analyze most commercial and recreational fishery survey data bases is severely limited; and
- @ There is no common forum for concerned agencies in the Region to plan, coordinate, and evaluate marine commercial and recreational fisheries data collection and management activities.

PURPOSE

Having determined that there is an urgent and compelling need for statistical data on marine commercial and recreational fisheries of the southeastern United States, the signatories to this MOU confirm their intent to establish a cooperative, State/Federal, southeastern Fisheries Information Network. The FIN is intended to coordinate present and future commercial and recreational fisheries 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.

While this MOU establishes the FIN, with its component programs the ComFIN and the RecFIN, for the Southeast Region, it is important to acknowledge the ongoing development of a unified, Atlantic coast cooperative statistics program under the auspices of the Atlantic States Marine Fisheries Commission. When established, this program will provide coordination and appropriate standardization of protocols and avoid duplication of effort in the collection and management of fisheries data along the Atlantic coast. Throughout the development of this Atlantic coast program, there has been close coordination with the ComFIN and the RecFIN programs of the Southeast Region. It is expected that upon its establishment, a formal linkage between the Atlantic coast program and the FIN will be developed and implemented. Such a linkage will assure interregional and national coordination and cooperation, as stated in the goals and objectives of this MOU, will avoid duplication of effort among regions, and will provide for a unified approach to the collection and management of marine fisheries data throughout the nation.

AUTHORITY

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

National Marine Fisheries Service:

- @ Section 1854 (e) of Title 16 of the U.S. Code, part of the Magnuson Act, requires the Secretary of Commerce to initiate and maintain, in cooperation with the fishery management councils, a comprehensive program of research regarding fishery conservation and management and on the economics of the fisheries.
- @ Section 1525 of Title 15 of the U.S. Code authorizes the Secretary of Commerce to engage in joint projects on matters of mutual interest with other government agencies, and non-profit organizations, where the cost of such activities is equitably apportioned among the parties.
- @ 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 marine commercial fisheries statistics.
- @ 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.

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 administered 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.

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 Environmental Protection 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 fisheries 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.
- @ Georgia Code Section 27-1-23 authorizes the Department agents to inspect business premises and records of commercial license holders.
- @ Georgia Code Section 27-1-24 authorizes the Department to board, inspect and examine the vessel, its equipment, wildlife on board, and required documents.
- @ Georgia Code Section 27-4-118 requires any commercial fishing boat or vessel to maintain and carry a record book showing information pertaining to their catch.
- @ Georgia Code Section 27-4-135 requires the maintenance of records by sellers and reports of oysters and clams harvested.
- @ Georgia Code Section 27-4-136 requires the maintenance of records by seafood suppliers.
- @ Georgia Code Section 27-4-171 requires licensed bait shrimpers to report maintain records and report information pertaining to bait shrimp sales.
- @ Georgia Code Section 50-18-70 states that all public records be open for inspection to the general population.
- @ Georgia Code Section 50-18-72 refers to the limited application of provisions and refusal to disclose identity of informant.

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 Ordinance 9.002 directs the Department to obtain statistical information on recreational fisheries landed or processed in the State of Mississippi.
- @ Mississippi Code of 1972, Section 25-61-1 refers to the Public Records Act of 1983 concerning data confidentiality.
- @ Mississippi Code of 1972, Section 79-23-1 refers to the Commercial and Proprietary Information Act concerning data confidentiality.

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 and the endorsement to sell is authorized by GS 113-154.1.
- @ Collection and protection of statistical information are authorized by GS 113-163.

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 saltwater 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.

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.
- @ The Atlantic Coastal Fisheries Cooperative Management Act (Title VIII of H.R. 2150) directs the Commission to adopt fishery management plans for coastal fisheries, and establishes an affirmative obligation on the part of the states to implement the Commission's plans. The Commission is required to continuously review state implementation, and report its results to the Secretaries. If it finds that a state is not in compliance, the Commission must report that finding to the Secretaries. If the Secretary of Commerce agrees with the Commission, he may impose a moratorium on all fishing for the species in question within the offending state until they come into compliance.

Gulf States Marine Fisheries Commission:

- @ The Gulf States Marine Fisheries Compact (P.L. 81-61) 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).

PROPOSED PROGRAM

The FIN will consist of two major components: the Commercial Fisheries Information Network (ComFIN) and the Recreational Fisheries Information Network in the Southeast Region [RecFIN(SE)]. Each program has its own mission, goals, and objectives and address specific issues related to its area of emphasis.

ComFIN

The mission, goals, and objectives of ComFIN are preliminary and may be refined as the Framework Plan and operations plans are completed.

Mission

The mission of the ComFIN is to cooperatively collect, manage, and disseminate marine commercial and anadromous fishery data and information for the conservation and management of fishery resources in the Region and to support the development of a inter-regional program.

Goals and Objectives

- GOAL 1: To plan, manage and evaluate a coordinated State/Federal marine commercial fishery data collection program for the Region.
 - Objective 1 To establish and maintain a ComFIN Committee consisting of MOU signatories or their designees to develop, implement, monitor and evaluate the program.
 - Objective 2 To develop and periodically review a Framework Plan that outlines policies and protocol of the program
 - Objective 3 To develop annual operation plans, including identification of available resources, that implement the Framework Plan.

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

Objective 5 To conduct a program review at least every five years of operation to evaluate the program's success in meeting needs in the Region.

GOAL 2: To implement and maintain a coordinated State/Federal marine commercial fishery data collection program for the Region.

Objective 1 To characterize and periodically review the commercial fisheries and identify the required data priorities for each.

Objective 2 To identify and periodically review environmental, biological, social and economic data elements required for each fishery.

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

Objective 4 To identify and evaluate the adequacy of current programs for meeting ComFIN requirements.

Objective 5 To coordinate, integrate and augment, as appropriate, data collection efforts to meet ComFIN requirements.

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

GOAL 3: To establish and maintain an integrated, marine commercial fishery data management system for the Region.

Objective 1 To periodically review and make recommendations regarding the location and administrative responsibility for the ComFIN data management system.

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

Objective 3 To implement, maintain, and periodically review a marine commercial fishery data management system to accommodate fishery management/research and other needs.

- Objective 4 To develop, maintain, and periodically review standard protocols and documentation for data formats, inputs, editing, storage, access, transfer dissemination, and application.
- Objective 5 To identify and prioritize historical databases for integration into the marine commercial fisheries database.
- Objective 6 To evaluate and recommend innovative, cost-effective information management technologies.
- Objective 7 To protect the confidentiality of personal and business information, as required by state and/or federal law.

GOAL 4: To support the development and operation of an inter-regional program to collect, manage and disseminate marine commercial fisheries information for use by states, territories, councils, interstate commissions and federal marine fishery management agencies.

- Objective 1 To provide for long-term inter-regional program planning.
- Objective 2 To coordinate ComFIN with other regional and national marine commercial fisheries programs.
- Objective 3 To encourage consistency and comparability among regional and national marine commercial fisheries programs over time.

RecFIN(SE)

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 marine recreational fisheries (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 Region.

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

Objective 2: To develop and periodically review a Framework Plan that outlines policies and protocols of the program.

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

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

Objective 5: To conduct a program review at least every five years of operation to evaluate the program's success in meeting needs in the Region.

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

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

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

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

Objective 4: To periodically review 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, MRF data management system for the Region.

Objective 1: To periodically review and make recommendations regarding the location and administrative responsibility for the RecFIN(SE) data management system.

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

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

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

Objective 5: To identify and prioritize data bases for integration into the MRF data management system.

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

Objective 7 To protect the confidentiality of personal and business information, as required by state and/or federal law.

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 and national MRF programs.

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

IMPLEMENTATION

Participants in this MOU recognize the critical need for a comprehensive program to collect and manage marine commercial and recreational fisheries data in the 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 FIN in accordance with the mission, goals, and objectives of the ComFIN and RecFIN(SE), contingent upon available resources. This agreement will become effective with an agency upon signature of the authorized official of that agency.

The terms of this agreement may be modified at any time by mutual agreement of the participants, including the provision for the ComFIN and RecFIN(SE) Committees 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 GSMFC. The GSMFC will notify the other signatories of the proposed termination.

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.

Signatories of the FIN MOU

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National Oceanic and Atmospheric Administration

Andrew J. Kemmerer, Director
Southeast Region, National Marine Fisheries Service

Bradford Brown, Director
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Robert Baker, Director
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