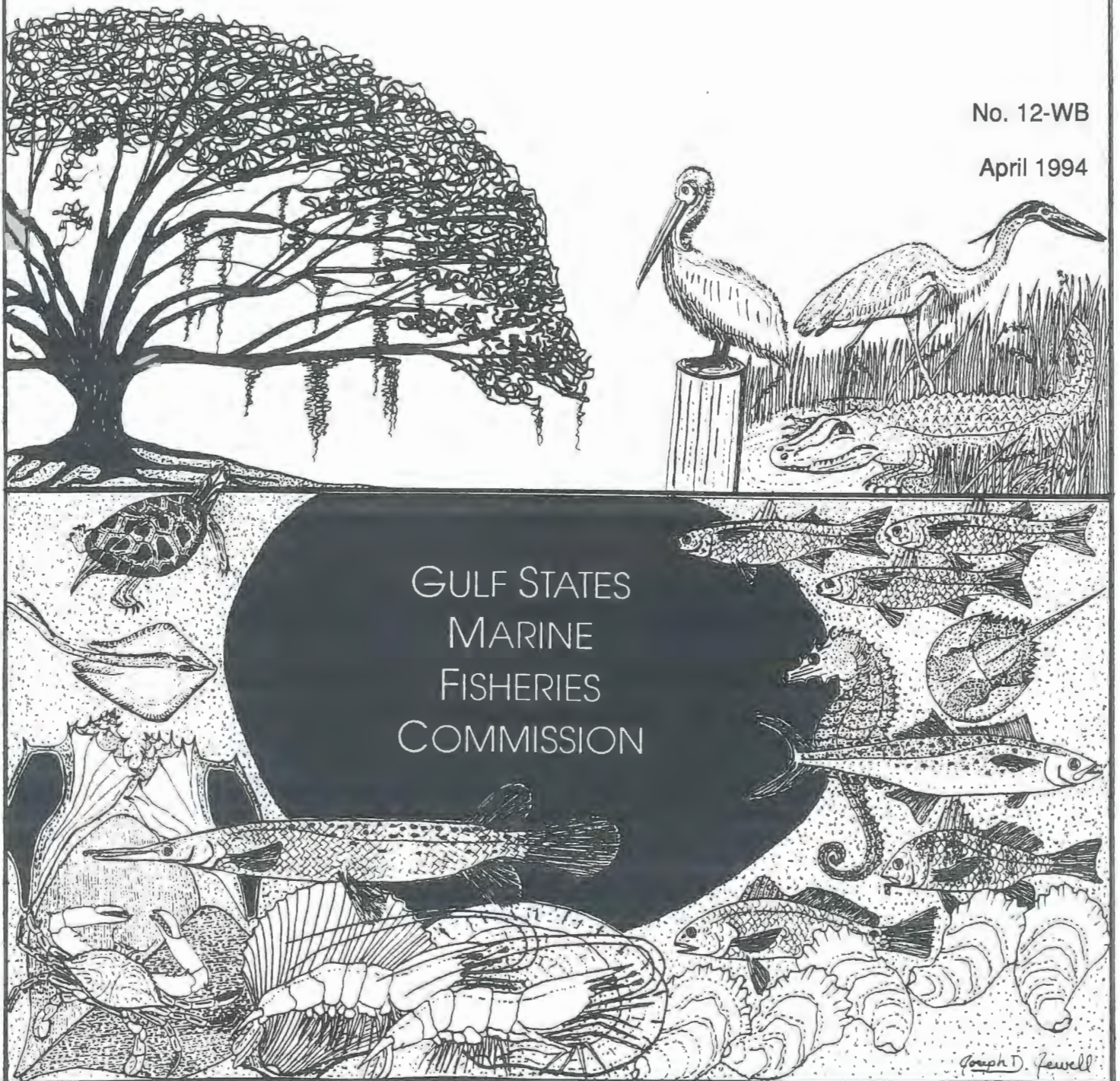


THE COMMERCIAL FISHERIES INFORMATION NETWORK

(ComFIN)

No. 12-WB

April 1994





**THE COMMERCIAL FISHERIES INFORMATION NETWORK
(ComFIN)**

A White Paper Discussion
Regarding the
Need for Planning and Coordination
of the
Collection and Management
of
Commercial Fisheries Statistics



No. 12-WB

April 1994

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INTRODUCTION

Beginning in 1992, the Gulf States Marine Fisheries Commission's Technical Coordinating Committee's (TCC) Data Management Subcommittee (DMS) began an initiative to review and analyze existing commercial fishery data collection and management programs being conducted in the Southeast Region¹ and elsewhere in the U.S. The initiative was called the Commercial Fisheries Information Network (ComFIN). The goal of the ComFIN initiative was to evaluate those programs as to their effectiveness in meeting current management needs for data, and to formulate recommendations for improving the collection and management of commercial data. The DMS sponsored a workshop in Atlanta, Georgia on February 26 and 27, 1993, during which a series of presentations were made to examine existing commercial fishery statistics programs. Information and/or formal presentations were provided for the following programs: The National Marine Fisheries Service's (NMFS) Northeast Region Weighout Program (Dr. Joan Palmer, information provided), the Pacific Fisheries Information Network (PacFIN, Guy Thornburgh presenter), the Southeast Area Monitoring and Assessment Program (SEAMAP, David Donaldson presenter), Caribbean commercial fisheries data activities (William Tobias presenter), the Florida Trip Ticket Program (Joe O'Hop presenter), Texas commercial fisheries data activities (Page Campbell presenter), the NMFS Headquarters commercial fisheries data activities (Paul Anninos presenter), and the NMFS Southeast Region commercial fisheries data programs (John Poffenberger presenter).

The following people attended and participated in the ComFIN meeting (alphabetical order):

Paul Anninos	Headquarters, National Marine Fisheries Service
Page Campbell	Texas Parks and Wildlife Department
Jane DiCosimo	South Atlantic Fishery Management Council
David Donaldson	Gulf States Marine Fisheries Commission
Gina Gore	Georgia Department of Natural Resources
Skip Lazauski	Alabama Department of Conservation and Natural Resources, Marine Resources Division
Ron Lukens	Gulf States Marine Fisheries Commission
Nancy Marcellus	Gulf States Marine Fisheries Commission
Daniel Matos	Puerto Rico Department of Natural Resources
Steve Meyers	Caribbean Fishery Management Council
Joe Moran	South Carolina Wildlife and Marine Resources Department
Joe O'Hop	Florida Department of Natural Resources, Marine Research Institute
Paul Perra	Atlantic States Marine Fisheries Commission
Paul Phalen	North Carolina Division of Marine Resources

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

John Poffenberger
Gordon Rogers
Joe Shepard
Guy Thornburgh
William Tobias

Tom Van Devender

Southeast Region, National Marine Fisheries Service
Georgia Department of Natural Resources
Louisiana Department of Wildlife and Fisheries
Pacific States Marine Fisheries Commission
Virgin Islands Department of Natural Resources,
Division of Fish and Wildlife
Mississippi Department of Wildlife, Fisheries, and
Parks, Bureau of Marine Resources

PRESENTATIONS

NATIONAL MARINE FISHERIES SERVICE NORTHEAST REGION WEIGHOUT PROGRAM

Dr. Joan Palmer was unable to attend the workshop; however, she sent materials pertinent to the goals of the workshop for the consideration of the participants.

Commercial fisheries statistics in the Northeast Region are collected using several methods and sources. These data are managed through the Northeast Marine Fisheries Information System (NEMFIS), which is a computerized data system implemented to facilitate interstate and federal sharing of commercial fisheries data collected under state and federal authority. The NEMFIS contains commercial fisheries catch and effort data and federal biological sample data (age and length data). State biological data can be added. The following are the sources of information for the system.

1. **Weighout/Interview**

The weighout has the landings and price of finfish and shellfish by date, vessel, and species. The effort (days absent, days fished, number of trips) and fishing location is determined by the Statistical Reporting Specialist (port agent) through an interview or a logbook. For trips that are not interviewed, the port agents estimate the effort and fishing location using their knowledge of the industry. These data are entered and audited by the port agents on microcomputers using the Commercial Data Entry System (CODES). These monthly data are then forwarded to Woods Hole for subsequent processing on the VAX mainframe computer using the Commercial Fisheries Data Building System (CFDBS). Required reporting is done from the Woods Hole Office.

2. **Regional Mandatory Bluefin Tuna Data Base**

The bluefin tuna fishery is managed by the Northeast Regional Office. The landings and price data for bluefin tuna are generated from the mandatory daily and weekly dealer reports maintained by their staff. At the end of each year, a file is created by the Northeast Fisheries Science Center

(NEFSC) staff in the standard weighout format required by NEMFIS and processed using CFDBS.

3. **Regional Mandatory Surf Clam/Ocean Quahog Data Base**

The NEFSC and the Northeast Surf Clam and Ocean Quahog Monitoring Program data are entered by a port agent in Woods Hole. The statistics from the vessel and processors logbooks are entered using the CLAM data entry system on a microcomputer. This software has an option to create the landings file required by the NEMFIS system. This file is created monthly and processed through CFDBS.

4. **Data Collected Under State Authority**

Several states (for example Maryland, Virginia) send their landings data directly to Woods Hole in the required weighout format. The data are then processed through CFDBS.

5. **Annual General Canvas Data**

The annual canvas data are collected by the port agent and entered using the CODES system. All data are then processed through CFDBS. The annual canvas data includes any supplemental or state data not reported directly to Woods Hole by the state.

6. **Maine Herring Fishery**

The Maine sardine fishery data are processed using software developed by the NEFSC for the state. This software allows state personnel to create a file that is then passed to the federal port agent in Maine for final processing through the CODES system and subsequently through CFDBS.

7. **Biological Samples**

All commercial length data, collected under federal authority, are entered by the port agent in the field. These data are sent to Woods Hole with the monthly weighout files.

8. **Shore and Boat; Operating Units**

The shore and boat and operating units data are entered by the port agent using software developed especially for these reporting requirements. The data are then sent to Woods Hole, merged, and forwarded to the NMFS Headquarters Office.

QUESTION: Are the port agents referred to federal port agents?

ANSWER: For the Weighout Program, they are all federal port agents. States do, as indicated, send in data collected by state port agents.

QUESTION: When was the NEMFIS established?

ANSWER: Around 1986.

COMMENT: There is a lot of personnel turnover in the northeast related to data programs; consequently, there is a lot of education going on. This is where program documentation plays a valuable role.

DISCUSSION: The discussion turned to trip information, and it was pointed out that the Weighout Program in the Northeast Region and the General Canvas in the Southeast Region are trip information programs. The comment was made that fishermen are becoming more aware of the usefulness of data collected by trip in light of the way that red snapper permits were allotted. If a fisherman did not have a way to document that he/she caught the minimum amount of red snapper in the preceding year, that fisherman could not get a permit to fish. Fishermen then began calling for a data collection system that tracks the kind and amount that they catch. There followed a discussion of the Trip Ticket System.

QUESTION: Is processed products a part of this program?

ANSWER: It is a national program for process products. The National Marine Fisheries Service conducts it in all regions.

DISCUSSION: It was pointed out that it is a very useful program, because in some cases fish or shellfish are shipped into a state for processing, and were not caught from their waters. That is good information to have from an economic standpoint.

QUESTION: What is the difference between the weighout and the general canvas?

ANSWER: The Northeast general canvas is annual year end data on the harvest, which includes catch by gear, species, month, water body, and port. It is not dealer information.

QUESTION: Does the program interview fishermen?

ANSWER: Yes. And port agents are allocated a certain number of biological samples that must be taken for certain species and certain fisheries.

DISCUSSION:

Rising from a discussion of at what point in the product flow data are collected, **the suggestion was made that a report should be produced that tracks how product moves through the system in each state.** For example, to whom can and does the commercial fisherman sell his/her product and how does product get to the local retail or restaurant markets. There was concurrence that such a report should be prepared. The discussion continued, pointing out that there are a number of ways that product can bypass the reporting system. Regarding the Florida Trip Ticket System, a fisherman must sell to a licensed dealer for the first point of sale; however, a fisherman may sell product out-of-state and bypass the reporting system.

QUESTION:

How do the Pacific states handle the issue of product bypassing the reporting system?

ANSWER:

Most product is sold to a licensed dealer on the Pacific coast; however, if a fisherman tries to sell outside that system, he/she is breaking the law because there is a landing tax on all fishery product landed. It then becomes an enforcement issue with the state revenue enforcement office.

PACIFIC FISHERIES INFORMATION NETWORK - GUY THORNBURGH

The Pacific States Marine Fisheries Commission (PSMFC) coordinates and administers the Pacific Fisheries Information Network (PacFIN), which began in 1980. The PSMFC is an avid promoter of fishery information systems and sharing of data, and has six major fisheries information management systems under their coordination and administration. In 1974, the PSMFC started the regional Mark Processing Center, which is a centralized computer system for every coded wire tag that goes into an anadromous fish in the northwest. There are 15 million tags applied each year, and every state, federal, and tribal agency participates, including Canada. The PSMFC also has a PIT tag information system to manage information from passive integrated transponders (PIT) that are put into salmon. Again, all agencies cooperate in the program. Another PSMFC program that is fairly new is the Coordinating Information System funded by the Bonneville Power Administration. This is a distributed computer data base that contains information related to fisheries, for instance stock status, habitat, historic records, etc.

There are six things that are vital to any state-federal, coordinated data program. The first is a Charter, which is a signed agreement by all participants indicating a commitment to the activity. The second is a Steering Committee, which is established by the Charter. Representatives from the participating agencies with technical and policy backgrounds should be members of the Steering Committee and provide guidance to the program. The third is a neutral data base administrator. The PSMFC is considered to be an

independent neutral body, since they have no rule making authority, have no direct interest in any particular fishery, and are not vested in any data collection, research, or management issues. The fourth is the need for a well established budget. This is an ongoing concern due to the volatility of state and federal budget cycles. Fifth, there must be a strong motivation to establish a coordinated data program. There is no point in having administrators sign a charter and commit funds if there is not a strong reason to do it. The sixth and final item is patience. Such multi-agency, state-federal, cooperative initiatives take a lot of time to evolve. It takes a commitment of time, money, and dedicated staff to keep things moving until the program becomes established.

PacFIN is twelve years in the making, and now represents a centralized, regional computer repository for all west coast fishery dependent data. Canada and Alaska contribute groundfish data. The states of Washington, Oregon, and California contribute every single fish ticket from every fishery prosecuted in the states each month. They also contribute vessel information, which allows the system to track individual vessel performance. The original motivation for establishing PacFIN was spurred by the passage of the Magnuson Fishery Conservation and Management Act. The coastal states had data collection and management systems on line; however, they were not adequate for tracking groundfish and interjurisdictional fisheries. Both the state and federal agencies wanted to be able to make in-season adjustments for groundfish management, and the only way to do that was to develop a good enough tracking system. The states realized that they could not do it alone, as did the National Marine Fisheries Service, so they all agreed that a cooperative, state-federal system was needed.

QUESTION: When the three states contribute their trip ticket information, do they process that information and send it to the PSMFC in computerized form, or does the PSMFC process the data?

ANSWER: Each state has their own independent fish ticket system. They submit their data to the PSMFC in a standard format.

QUESTION: Does the PacFIN Steering Committee influence the type of data that are collected and the way it is managed?

ANSWER: The PacFIN Steering Committee has developed many standards over the years; however, there is now a Statistical Subcommittee which handles technical issues. The PacFIN also has a Data Management Plan for each federal council plan to help determine the type and quantity of data needed to manage the particular fish stock.

DISCUSSION: PacFIN is now a line item in the NMFS budget. The amount has fallen from \$2.2 million three years ago to \$1.45 million in 1993, due to the cuts imposed on the program by the NMFS.

QUESTION: What about the coded wire tag data base?

ANSWER: The PSMFC manages a coded wire tag data base that contains about one million striped bass tags per year.

DISCUSSION: Coded wire tags have not been used much in the Southeast Region. Most programs use piercing tags like Floy's. Also the NMFS Southeast Fisheries Science Center in Miami has a program called the Cooperative Tagging Program in which they are trying to house all tagging data in the Southeast Region. The program did not develop from the states up, but rather was developed by the NMFS first and then offered to the states. It has not been very successful.

There was some difficulty early on in getting full cooperation with PacFIN. Alaska was the last to join. Two issues convinced them to join; the first was the need for exchange of ground fish data, and the second was the confidentiality provisions under PacFIN. It took two years to get the agreements for exchange of confidential data in place, and it was a big factor in getting the states to join. The PacFIN is very conscientious about to whom data are provided. Individuals or agencies who request confidential data must sign papers saying that they will protect the confidentiality and that they will return the data after use. If they make copies to keep, they can be prosecuted under state law.

QUESTION: Did the states already have their trip ticket programs in place before PacFIN?

ANSWER: Yes, and that was a fundamental part of getting started.

QUESTION: Do the council and federal needs for data drive the PacFIN?

ANSWER: No. Of about 1.1 million records per year, the dominant number are submitted by the states for state fisheries.

QUESTION: Does PacFIN have problems with competitive bidding for the contract from the NMFS?

ANSWER: No. The funding is transferred under cooperative agreements, and the PSMFC has fought very hard to get the funding into their budget and in turn disburse it out to the state partners.

DISCUSSION: The PSMFC nor its member states want to see the program put under competitive bidding. It is generally agreed among the partners that a state will always do a much better job of collecting data than will a private contractor.

SOUTHEAST AREA MONITORING AND ASSESSMENT PROGRAM - DAVID DONALDSON

Introduction

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a state/federal/university program for the collection, management, and dissemination of fishery independent data and information in the Southeastern United States. The program consists of three operational components including SEAMAP-Gulf of Mexico, which began in 1981, SEAMAP-South Atlantic, implemented in 1983, and SEAMAP-Caribbean, formed in 1988. Each SEAMAP component operates independently, planning and conducting surveys and information dissemination in accordance with administrative policies and guidelines of the National Marine Fisheries Service (NMFS) Southeast Regional Office (SERO).

Program Organization and Management

The program consists of two parts, program management and program operations. Under program management fall administrative and coordination functions, while under program operations, data collection and data management activities are conducted. The management agencies for the components of the SEAMAP include the Gulf States Marine Fisheries Commission (GSMFC), the Atlantic States Marine Fisheries Commission (ASMFC), and the Puerto Rico Department of Natural Resources (PRDNR). Some services provided by the management agencies are coordination and scheduling of committee and work group meetings and workshops; administration of funds for publications, meeting and workshop costs, personnel costs, travel, among others; and supervision and guidance of coordinators and clerical personnel. The program management bodies include the GSMFC Technical Coordinating Committee, the ASMFC South Atlantic Board, and the PRDNR. The management bodies function to review and approve component operations plans, review annual reports, and accept or reject actions taken by respective SEAMAP committees.

Participating agencies include North Carolina, South Carolina, Georgia, Florida, and the South Atlantic Fishery Management Council under the South Atlantic component; Florida, Alabama, Mississippi, Louisiana, Texas, and the Gulf of Mexico Fishery Management Council under the Gulf of Mexico component; and Puerto Rico, the U.S. Virgin Islands, the U.S. Fish and Wildlife Service, and the Caribbean Fishery Management Council under the Caribbean component. The NMFS SERO participates in all SEAMAP components. The participating agencies provide the scientific and technical support for the SEAMAP, and are responsible for the collection of data. The NMFS provides the data management function.

Committees, established under the auspices of the management agencies, are responsible for program management and are primary elements in program planning. Rules of order of the respective committees include annual election of chairman and vice-chairman, who may serve an unlimited number of terms; the use of consensus or majority vote of a quorum to reach decisions; provision for recorded votes upon request by a member; and provision for the preparation of detailed minutes of each meeting. The three committees meet jointly at least once a year, primarily to discuss funding allocations; however, the joint meeting also provides the three program components the opportunity to discuss problems and issues of mutual concern. Committee responsibilities include but are not limited to determining data needs and planning activities to meet those needs, establishing work groups for problem solving and task completion, and determining program budgets. Work groups are established to address specific issues or accomplish specific tasks. Work group activities include planning and evaluating approved data collection surveys, developing sampling designs, and developing data formats that are compatible with the SEAMAP data management system.

Each SEAMAP component is staffed with a designated program coordinator, who is responsible for overall coordination of the several agencies and activities of their respective program component. They are also responsible for program administration and planning. Areas of responsibility include but are not limited to working closely with the respective committee in all aspects of program coordination, administration and operation; serving as information liaison to organizations interested in the SEAMAP and its activities; and participating in and supervising the preparation of SEAMAP publications.

The program is managed under the NMFS SERO, which has overall responsibility and authority for the SEAMAP. The program manager, a NMFS employee, is responsible for program funding and allocations and ensuring that the goals, objectives, and activities are appropriate to the mission of the SEAMAP. The program officer, also a NMFS employee, is responsible for ensuring proper program documentation and administering the cooperative agreements that are used to outline participant responsibilities and funding.

Planning Activities

The SEAMAP five year management plan provides for coordination among the Gulf of Mexico, South Atlantic, and Caribbean components of the program. That plan sets forth program goals and objectives and outlines policies and procedures for program management.

Each component of the SEAMAP is responsible for developing annual operations plans which provide detailed guidelines for coordination and operational activities. That plan provides specific objectives and activities for each component for the upcoming year. The administrative mechanism for establishing respective responsibilities and funding levels between the NMFS SERO and each state partner is the cooperative agreement.

Program Operations

Data collection is accomplished through vessels and scientists provided by the state and federal SEAMAP partners. Cruise scheduling and planning are accomplished through the respective management bodies and program coordinators.

The NMFS serves as the data manager for the SEAMAP. Each participant can locally access the SEAMAP data management system, or can use the data request mechanism for data sets that are too large to download by modem. Other parties interested in acquiring SEAMAP data must submit a data request to the respective SEAMAP committee through the program coordinator. Information required in conjunction with a data request from an outside party include name of requestor and associates interested in using the data, requestor affiliation and address, proposed use of the data, intended publication format, if any, and a copy of the grant, proposal, or contract, if applicable.

The SEAMAP also manages a plankton specimen repository, which contains preserved specimens collected through the SEAMAP. Scientists may also request specimen loans from the SEAMAP curators. For all requestors the above detailed information must accompany any request for a specimen loan.

The SEAMAP is now in its twelfth year of operations, and is a line item under the NMFS budget. While supplemental funding has been acquired for the SEAMAP over the past several years, those funds were used to establish the South Atlantic and Caribbean components of the program. Due to reductions in total funding to the NMFS over the past several years, funds available to each SEAMAP component have decreased.

QUESTION: Does all the data that goes into the SEAMAP data management system go through Ken Savastano, NMFS?

ANSWER: Yes. The states load their data directly on local terminals and transfer the data to the Burroughs in Miami. Savastano then conducts verifications and data checks before the data are finalized and made available.

DISCUSSION: The SEAMAP data management system was designed by Sverdrup, a private consulting firm, and was developed over a two year period in full cooperation with the states. It is considered to be a very user friendly system and is flexible enough to change to meet specific needs.

CARIBBEAN COMMERCIAL FISHERY DATA PROGRAMS - WILLIAM TOBIAS

The Caribbean fisheries are comprised of multi-species and multi-method fishing activities, with over 350 different species of reef fish that have been identified. The Caribbean Fishery Management Council, in the development of the Shallow Water Reef Fish Fishery Management Plan in 1985, identified 180 of these species as components

of the shallow water reef fish fishery. Of the 180 species, 64 are commonplace. The methods used to harvest these species are typically, in order of priority, fish traps, line fishing, diving, and various forms of net fishing. These are primarily artisanal fisheries. No fish are exported from the Caribbean; all are consumed locally. The average size vessel used in the typical fishery is fiberglass or wood and less than six meters in length with an outboard motor, so it is evident that these are small scale fisheries.

The island of Puerto Rico has about 300 miles of coastline, and the government claims a nine mile territorial sea. The commercial fisheries data was originated by the corporation for the development of marine resources of Puerto Rico, locally known as CODREMAR. CODREMAR is no longer in existence, being replaced by the Puerto Rico Department of Natural Resources (PRDNR). Data collection originally started in 1967 with interjurisdictional fund (P.L. 88-309) monies through the NMFS, along with funds from the territorial government of Puerto Rico. The PRDNR Fisheries Research Lab, which conducts the data collection, has a staff of ten people for commercial fisheries data collection. Six of those people are port agents that are in the field. Two are data entry people, and two are program managers. Hardware for data entry consists of IBM and IBM compatible equipment. Software consists of dBase, Lotus, TIP, Excel, and Quatro Pro, similar to the Virgin Islands. There are 92 fishing centers in 42 municipalities around the Puerto Rican coast. Puerto Rico collects landings data, biostatistical or bioprofile data, and conducts an annual census on the total fishery. Fishermen cooperate with port samplers on a volunteer basis, as there are no laws in Puerto Rico which require mandatory reporting. The PRDNR uses a trip ticket system for recording fisheries landings. This information is collected from fishermen who sell their catch or from fish buyers on a biweekly or monthly basis. There are approximately 20,000 trip tickets collected per year. There are approximately 2,000 licensed commercial fishermen in the Puerto Rican fishery, with a little less than 1,000 vessels.

Reef fish are typically landed whole, whereas deep water snapper and grouper are usually landed and marketed gilled and gutted. Also landed are lobster, oysters, octopus, and land crab. In Puerto Rico, fish are landed in classes. The larger snapper, grouper, and hog fish command the highest prices and are number one class. A class two fish would be smaller snapper, grouper, parrotfish, goatfish, and trigger fish. Class three fish include smaller specimens of the class two fish and squirrelfish. There is also a trash fish category which includes surgeon and butterfly fishes. Reef fish alone total about two million pounds annually. The value of reef fish landings in Puerto Rico is approximately \$4 million. Fish trap and line fishing are the most popular gear types used in the fishery, accounting for approximately 36% of the landings by weight. Net fishing (gill net, trammel net, cast net, and seine net) and diving are the second most popular gear types used, accounting for approximately 18% and 19%, respectively, of the total landings by weight.

In general, all harvested marine resources have been in a severe state of decline since 1979. Reef fish landings have declined from seven million pounds to two million pounds from 1979 to 1991. Lobster landings have been reduced by 50% from 1980 to 1991 (400,000 pounds to 200,000 pounds). More than 50% of the lobsters landed in Puerto Rico are less than the minimum size limit of 3.5 inches carapace length. Conch landings have been reduced by 75% from 1979 to 1991 (four million pounds to one million

pounds). Although there are 305 DNR Rangers deputized to protect these resources, these same individuals are required to enforce more than 100 environmental statutes. The specific section of Rangers designated for the enforcement of marine resource regulations has been dismantled. At the present time, the Government of Puerto Rico is considering the establishment of conch regulations and mandatory reporting of commercial landings.

Current trends in the fishery include a decrease in the use of fish traps and an increase in the use of other gear types, including line fishing, nets, and SCUBA diving. The inshore artisanal fishery has been and continues to be adversely affected by coastal development, dredging and filling of wetlands, and pollution (point and non-point source), resulting in the degradation and loss of important fisheries habitat.

On-going fisheries independent studies in Puerto Rico include Department of Commerce, National Marine Fisheries Service, SEAMAP, and Department of the Interior, U.S. Fish and Wildlife Service, Sport Fish Restoration Program studies on snook and tarpon fisheries and other aquatic resources. Recreational fishery data are currently not being collected. Puerto Rico and the U.S. Virgin Islands have been excluded from participation in the Marine Recreational Fishery Statistics Survey, although a significant recreational fishery exists and would greatly contribute to the recreational data base, which is currently collected from the states in the Southeast Region.

The U.S. Virgin Islands is comprised of three main islands, including St. Croix, St. Thomas, and St. John. Together, these three islands have 172 miles of coastline. St. Thomas and neighboring St. John lie on the same shallow, extensive shelf platform as Puerto Rico. St. Croix lies on a small, isolated, oceanic platform 40 miles to the south. The Government of the Virgin Islands has required by law the mandatory reporting of commercial fishermen catch records since 1974. Commercial fisheries data are collected by the Department of Planning and Natural Resources, Division of Fish and Wildlife (DFW). Initially, commercial fisheries data collection programs started with Department of Commerce, National Marine Fisheries Service (NMFS), Interjurisdictional Program funds (P.L. 88-309) prior to the development of the State-Federal Cooperative Statistics Program (CSP) in 1982. Funding support for the collection of commercial fisheries data in the U.S. Virgin Islands is solely through the support of the NMFS CSP.

At the present time, there are six DFW staff involved in the collection of commercial fisheries data, four on St. Croix and two on St. Thomas. The fishery staff that collects commercial fishery data also work on thirteen other projects, primarily those funded by the Federal Aid in Sport Fish Restoration Program. The data entry hardware consists of IBM and IBM compatible equipment with similar software as listed for Puerto Rico.

There is a mandatory reporting law in the Virgin Islands, and fishermen must submit annual tax records for annual renewal of their commercial fishing license. This system creates some problems, because fishermen are good at fishing but not very good at keeping records. Many times, if it gets done at all, someone else, wife, children, or a friend, will keep the records. The Virgin Islands feels strongly that actual landings exceed reported landings, a situation caused by the poor record keeping of the fishermen. In

1990, a law was passed to require monthly tax records submission, and this has improved reporting considerably. When a fisherman renews his/her license, he/she is given a booklet with twelve landing forms corresponding to each month. The fish are in pounds, by trip, by gear, or fishing method. There are approximately 400 licensed fishermen in the Virgin Islands, with a total number of vessels of 200. Total annual landings are about two million pounds worth about \$4 million.

As a check on commercial fisherman catch records, the Virgin Islands conducts personal interviews with fishermen. This is done at landing sites when fishermen dock or at selling points. Fishermen have the ability to market their catch as soon as they reach shore. The fish are not normally processed through separate vendors. Upon reaching shore, boats are small and trailerable, so they are usually pulled out of the water with the catch on board. Once the catch is landed, it is sold from the boat or from the back of a pickup truck along the roadside. This creates problems obtaining biostatistical data, as samplers have to compete with paying customers to obtain the fish for sampling. The Virgin Islands agreement with the NMFS requires them to individually weigh and measure 500 fish per month, and 75 lobsters per month per island group. On St. Croix obtaining biostatistical data is somewhat easier. There is one shop which markets fish on Saturday. The port samplers are permitted to weigh and measure all fish that pass through the shop prior to opening on Saturday morning. Since there is a concentration on one fisherman and one fish shop, the data are biased; however, that is the most efficient and effective way to get the most and best quality data.

The Division of Fish and Wildlife on St. Croix is involved in a study design project which started in 1990. It is designed to allow the Division to expand data collection on fish landings. There are 16 landing sites identified where fishermen bring their catch to shore. These are being evaluated as to total number of fishermen and boats that use the sites. Efforts will be made to estimate the total amount of fish landed through each of the identified sites. Preliminary results of the study indicate over 535 fish interviews with 93 thousand pounds of fish reported. For conch, there are 104 interviews and over 9 thousand pounds, and for lobster there are 105 interviews and 2800 pounds landed. There are 132 interviews for pelagic fish with 19 thousand pounds landed.

In the Virgin Islands fishery management regulations are developed through advisory committees, comprised partially of government representatives and partially of fishermen, established by law in 1974. These advisory committees have been successful in making recommendations to the Commissioner or the Governor regarding the management of conch and seasonal closures for spawning aggregations of red hind. With many of the fisheries in states of decline it is expected that the advisory committees will continue to be active.

In addition to the fishery dependent data collection work, there are a number of fishery independent studies underway, including involvement in SEAMAP, a benthic mapping study, baitfish projects, pelagic fish studies, a billfish tracking project, among others. The Division is also involved in a long term data base for recreational fisheries. In 1991, a stock assessment workshop for shallow water reef fish was conducted jointly with the NMFS through the Caribbean Fishery Management Council, PRDNR, and the Virgin

Islands. Data sets used were primarily those from 1983 through the present, but focusing on 1985 and 1990 because they were more complete data sets. The overall results indicate a drastic state of decline, as concurred by PRDNR and the Virgin Islands. The fishery is down from an average annual landing of five million pounds to two million pounds in 1990 in Puerto Rico. The composition of the fishery has changed from shallow water snapper and grouper to deep water snapper and grouper. The catch-per-unit-effort for reef fish in traps off Puerto Rico has declined from 325 pounds per trap per year in 1978 to 45 pounds per trap per year in 1991. The same situation exists off the Virgin Islands.

The Caribbean region has seen a definite need for a comprehensive fisheries information network, and in that regard held a meeting in Puerto Rico in January 1993 to lay the groundwork for the Caribbean Fisheries Information Network (CarFIN).

QUESTION: All fish landed in the Virgin Islands are consumed locally?

ANSWER: Yes, with the possible exception of some limited exporting of conch, primarily among island groups.

QUESTION: Does a trip ticket include how long the fishermen have been out?

ANSWER: Yes, 97% of the trips off Puerto Rico are one day trips. A fisherman typically leaves early in the morning and returns by noon, or leaves at 6:00pm and returns at 2:00am.

QUESTION: Are there any license or landing fees?

ANSWER: Not in Puerto Rico; however, the issue has been discussed. There is a \$50 commercial license fee in the Virgin Islands; however, it is not paid every year by every fisherman. There is a good deal of confusion over commercial license fees.

QUESTION: What federal fishery management plans are in effect in the Caribbean?

ANSWER: Shallow water reef fish, lobster, and conch, in development.

QUESTION: Has any action been taken toward CarFIN, and who is sponsoring the initiative?

ANSWER: There has been action to establish CarFIN. The Caribbean Fishery Management Council took the lead in the meeting to

discuss the possibility for CarFIN; however, that was done on the initiative of one individual who will likely not continue to be with the Council.

QUESTION: Will CarFIN include fishery independent and dependent data programs?

ANSWER: Yes.

DISCUSSION: There was a presentation of the Recreational Fisheries Information Network (RecFIN) at the Caribbean meeting, and the participants expressed a great deal of interest in the organizational structure created by that program as a way to organize CarFIN.

QUESTION: Do any large boats land in the Caribbean to offload their catch?

ANSWER: Presently, no large boats land in the Caribbean; however, tuna and swordfish boats have landed in the Caribbean in the past.

FLORIDA MARINE FISHERIES INFORMATION SYSTEM - JOE O'HOP

The Marine Fisheries Information System (trip ticket program) is administered by the Florida Marine Research Institute - a part of the Florida Department of Natural Resources. The Institute has developed a long-range plan for the study of marine fisheries which includes a combination of fishery-dependent and fishery-independent data collection programs. One component of the fishery-dependent programs is the marine fisheries trip ticket program which provides commercial landings and effort data in Florida. Another component provides biostatistical samples from commercial fishing trips through the use of trip interviews. Florida has length-frequency data from the biostatistical sampling program from as far back as 1984; however, few of Florida's regions were covered by the sampling. Florida is establishing field labs in several regions of the state, and the collection of biostatistical data is expanding into those regions.

Florida has a small recreational fisheries data collection program at present, providing inventories of recreational fishing access sites and some angler interviews. We envision that this program may eventually supplant the NMFS Marine Recreational Fishery Statistics Survey given sufficient funding and an expanded and sound statistical design. Florida has fishery-independent programs directed toward recreational and commercial fisheries. The juvenile fish monitoring program monitors nearshore areas to obtain species composition, size frequencies, abundance, habitat type, and gear selectivity of juvenile fishes. The Institute has expanded this program to five regional field labs to

cover several major estuarine systems of the coast, and several more field installations are planned for providing information for the rest of Florida's coastal areas. The Institute has major research programs directed towards fish and invertebrate research, bycatch, bait fish and mullet, red tide, manatees, dolphins, sea turtles, pathogens of fish, and hatchery feasibility and assessment research.

The trip ticket program is designed to provide adequate data along with landings so that management of marine fisheries can be based upon the best data for landings, effort, and participation. The ticket serves as a dock receipt for fishermen and dealers. It provides the pounds (or other reporting units) landed for each market category, and a measurement of effort and time away from the dock for each fishing trip. The trip ticket was designed to answer which species and how much each fisherman is catching and in what fisheries each fisherman is participating. Recently, trip ticket records were used by Florida fishermen to document the history of their landings of red snapper in order to qualify for federal (NMFS) permits to fish for this species in the Gulf of Mexico. Trip ticket data was used to document landings of spiny lobster and allocate and assign trap certificates to fishermen under Florida's Spiny Lobster Trap Certificate Program. Landings over a three-year period were summed by season for each qualifying fisherman (individuals or businesses), and the highest season's landings were used to allocate trap certificates. Trip tickets have also been used to qualify fishermen for the restricted species endorsement necessary in Florida for a fisherman to commercially harvest and sell species such as groupers and snappers, Spanish and king mackerel, and others.

Legislation enabling the Marine Fisheries Information System, which has as a major part the trip ticket program, was passed in 1983. The statutes and administrative code require that purchases (sale, exchange, barter, distribution) or first time landings (for those dealers who produce or catch their own saltwater products) be reported to the Department of Natural Resources. Subsequent sales of product between wholesale dealers or brokers are not required by these reporting rules. There is no legal way around the reporting rules. During 1985, the trip ticket program and the general canvass landings were conducted in parallel to compare the landings information from both data collection systems. There were some differences. For instance, in some cases the trip ticket system provided greater coverage of dealers than port agents. Either the port agents did not go to every dealer or they may not have been aware of every dealer in the area. In 1986, the trip ticket landings became the official landings information for Florida. Additional legislation in 1986 allowed the data base containing trip ticket data to retain the license numbers of all commercial fishermen and dealers. We can track fishermen's landings back to late 1986. The confidentiality of the data are protected by Florida Statutes which specifically exempt trip ticket data from the state's Open Records statutes.

Trip tickets are uniquely identified by an invoice number printed on each ticket. There are fields on the ticket for the fishermen's Saltwater Products License (SPL) number. Fishermen must have the SPL in order to catch commercial quantities of fish or invertebrates and to sell to wholesale dealers. There are two types of dealer licenses. A wholesale dealer license allows a dealer to purchase from a licensed fisherman, produce (catch) their own saltwater products, and sell to other wholesalers and retailers. The retail license allows a dealer to produce their own products and sell these to the

public. Presently, any dealer producing their own products must also possess the SPL. There are other fields on the trip tickets for the dealer's license number, date, time fished (time away from the dock), area fished (following the NMFS shrimp grid coding), depth fished, county landed, number of sets (usually for nets and longlines), traps pulled (trap fisheries), soak time (traps), species code, amount of catch, unit price, and dollar value. Originally, trip tickets contained the county where the dealer was located which was usually the first point of sale for the products. That definition of county landed caused some difficulties in interpreting information, so in 1989 the definition of county landed was changed to mean the county where the products first were brought ashore. In 1990, gear fished information was added as a field on trip tickets. This field allows a fishermen to code for many different gears fished including purse seine, haul seine, longlines, hook and line, traps, trawls, gill nets, trammel nets, or other gears using a four-digit code.

QUESTION: Can fishermen check multiple gears?

ANSWER: Yes. They can check up to two different gears, even though fishermen could possibly use more than two gears.

QUESTION: Is the catch broken out by gear?

ANSWER: No. It will be up to the scientist using the data to assign one of the gears if there are two checked.

QUESTION: How would those data go into the general canvass if a gear is not assigned?

ANSWER: They are "shoe-horned" into the categories somehow. The system is designed to be as simple for the fishermen as possible and still get the kind of information needed. Interpretations can be made based on the gears checked and the kind of fish landed. For instance, tuna probably came in on surface longlines. Grouper and tilefish would probably come in on bottom longlines, etc.

QUESTION: When trip ticket data are submitted to the NMFS, do they have gears recorded?

ANSWER: No. The gears must be assigned after the fact in the case where more than one gear was checked.

QUESTION: Does Florida give the fishermen a list of accepted codes?

ANSWER: The dealers have the code list. The dealers are required to fill out the trip tickets.

Other information on the trip ticket includes number of sets, number of traps, species market category, pounds landed, and other reported events. The fisherman is entitled to get a copy of the trip ticket at the time of sale. The dealer has a copy, and two copies are sent to the Institute. The reason two are sent is that the Institute keeps a back-up copy in case the keypunch contractor loses its copy.

QUESTION: Are the tickets sent in to one location for key punching?

ANSWER: Yes. They are all sent to St. Petersburg. There are six DNR staff assigned to the initial screening and processing of tickets.

QUESTION: Do the six staff work with law enforcement to determine when a dealer is out of compliance with filing trip tickets?

ANSWER: There is close work with licensing to determine when new dealers come on line, and there is a lot of interaction with law enforcement; however, the Department tries to be as "friendly" as possible to dealers who are in arrears.

There are three types of trip ticket forms that are approved for use. One is standard Department issue, which is about the size of a charge card slip and fits into an imprinter. Another is a dealer preprinted form which must be approved by the Department to make sure that the ticket has all the right fields. The third type involves computer records. A dealer may custom design his own software and provide the required information that way. The Department also has a program called "Dockside" which looks like a trip ticket on the computer screen, and the dealer simply fills it in. It is not, however, a complete accounting package for the dealer. [A fourth reporting form is the NMFS oyster tally sheet - a remnant of a former data collection program - and is still in use by a few dealers.]

QUESTION: Why do dealers want their own preprinted forms?

ANSWER: So that they will have their letterhead or logo on the form, which is usually printed on NCR-type paper.

QUESTION: Does DNR provide the dealer with a ticket imprinter?

ANSWER: Yes. Funds from the saltwater products license come to the DNR to offset administration and operations of the trip ticket program. Funds from the dealer licenses go to the seafood

marketing program. Dealers who want their own forms must pay for them.

QUESTION: Does DNR provide the "Dockside" software to the dealers?

ANSWER: Yes. It is free on diskette. [We also supply the printed documentation and help dealers (by telephone) with setting up the program and troubleshoot problems they experience with the program. We also make minor modifications to the program as the need arises.]

QUESTION: Does DNR give the dealers the tickets and the postage paid envelopes in which to mail the tickets?

ANSWER: Yes. Providing all these support materials takes away an excuse for dealers not reporting.

QUESTION: Are dealers required to report certain commodities in certain forms; for instance, crabs in bushels, whelks in pounds of meats, etc.?

ANSWER: Yes. Fish are normally reported in landed pounds. Crabs are in numbers or in pounds. Shrimp, if reported in numbers, are converted to pounds. The trip ticket is regularly altered to add species or categories. [The species codes used are linked not only to the species or market category landed, but also to the normal reporting units for the code. For example, bait shrimp has two codes. The code 345 is used for reporting live bait shrimp in numbers of animals. The code 346 is used for reporting pounds of bait shrimp (usually dead).]

QUESTION: How many codes are required now?

ANSWER: Approximately 600.

QUESTION: How many species will fit on each ticket?

ANSWER: On each ticket, nine species can be recorded; however, a ticket can be continued onto the next form by marking out the next ticket invoice number and writing in the first ticket invoice number. [The tickets used for reporting landings of marine life (for the aquarium trade), some dealer's preprinted forms, and

computer generated records may hold more than nine entries.]

QUESTION: Why are prices and value optional on the ticket?

ANSWER: It was set up that way by the legislature.

QUESTION: How are gross economic analyses done for the contribution of fisheries to state revenues?

ANSWER: Some dealers voluntarily provide price data on the trip tickets to the Institute. [NMFS' port agents, through the State/Federal Cooperative Statistics Agreement, collect some monthly price information from some dealers and provide these data to the Institute.] The price and value data are used to develop a weighted average statewide price used to estimate the economic value of fisheries.

QUESTION: What is the time frame for submitting trip tickets?

ANSWER: The records have to be submitted by the tenth working day of the month for the preceding month's purchases.

QUESTION: What is the cost of printing the DNR standard forms?

ANSWER: About eight or nine cents apiece. About 400,000 are sent out annually.

QUESTION: What about using bar codes for the invoice number so the form could be scanned?

ANSWER: That may work. [Perhaps when optical character recognition technology improves we may try incorporating that technology into the keypunch and editing systems we currently use. At present, the handwriting on the tickets is too variable to use OCR. We try to encourage dealers to make use of computer technology that would aid not only us but the dealers as well.]

QUESTION: When a dealer uses the "Dockside" program, do they also have to provide the fisherman a hard copy, and do they send in the diskette and hard copies to the Department?

ANSWER: Yes, they must make available a hard copy receipt to fishermen, but they do not send a hard copy to the Department, just the diskette.

QUESTION: Does the Department have a signature or any way to verify a fisherman?

ANSWER: No. The data on trip tickets can be misreported [if the dealers get the license numbers or other information miscoded]. Data entry mistakes can be made at any point in the process. [We specify double key punching in our key punch contract to reduce key errors to a very low level. Most errors we see are caused by dealers improperly filling out the trip ticket, by using old license numbers for fishermen, by handwriting which is difficult to interpret, or by miscoding species because of the local names used (for example, menhaden are often called "shad" in some places, mojarra are often referred to as "goatfish" and "sand perch").]

QUESTION: Could a dealer make up data, and how would it benefit him to do so?

ANSWER: Yes, a dealer could falsify data. It would directly benefit a dealer if he wanted to buy product from a recreational fisherman and he needed a trip ticket to go along with the sale of the product. [It may benefit a fishermen who needed to document sales of saltwater products to qualify for the restricted species endorsement or other types of state or federal permits, or to "gain history" in a fishery if some type of limited entry system was being proposed as part of a management plan.]

QUESTION: Can recreational fishermen sell their catch in Florida?

ANSWER: No. If a recreational fisherman wants to sell all or part of his catch, he must purchase a saltwater products license. That license makes him a commercial fisherman.

QUESTION: How much is a saltwater products license?

ANSWER: A resident saltwater products license is \$50 for an individual and \$100 if the vessel is licensed. For a non-resident, quadruple those costs. [Fees are: Non-resident individual SPL \$200, vessel \$400; alien individual \$300, vessel \$600]

For state or federal quota-managed species, reporting is required weekly if a dealer handles more than 5,000 pounds in a year. Key punched data becomes available within about two weeks after we receive it. Key punching can handle about 8,000 trip tickets a week currently. Each month about 700 dealers report some kind of activity. A very small percentage of dealers in any given month will report no activity. Some "no activity" reports may result from seasonality of fisheries or dealer operation, or from events like Hurricane Andrew. It is important if a dealer is not buying or producing product that they report no activity to the Department. Otherwise, these dealers will receive a letter from the Department asking why they did not report on time.

QUESTION: Can dealers FAX data to the Department?

ANSWER: No. It must be a letter or a trip ticket indicating no activity.

QUESTION: Is there a problem with dealers not sending in "no activity" reports?

ANSWER: It is difficult to know how much of a problem it is. [Generally, either the dealers respond to our "delinquent" letters for not reporting or we give them a telephone call and find out why they are not sending reports (trip tickets to us.)]

QUESTION: Does the Department have the cooperation with law enforcement who are not reporting properly?

ANSWER: The system allows for the coordination needed. [If we cannot get a satisfactory response from a dealer, we inform the Marine Patrol and they send an officer to check on the dealer's operation.]

QUESTION: How many dealers report annually?

ANSWER: Approximately 1200.

QUESTION: Are there problems with data processing between the biological and enforcement staffs?

ANSWER: Yes.

The Department receives about 400,000 trip tickets annually, excluding the "no activity" reports. There is an average of 2.5 species reported on each trip ticket, amounting to about one million species records per year. The amount of catch reported annually is near 200 million pounds, ranging from 180 million to 210 million pounds. Due to the confidentiality provisions, access to those records is denied; however, a fisherman can have a copy of his own records submitted to the Department. To get landings records, the fisherman fills out a notarized form (or shows up at the Department with identification) and receives the data. The fisherman and dealer can get the data usually in any form or detail that they want. Confidential data are provided to DNR staff, but requests must go through a screening process to determine if the release of confidential data is necessary. Law enforcement can have access to the data, but they must go through certain internal procedures to get it. [Access to confidential data is restricted and generally is evaluated on the benefits to fisheries management and the Department derived from the release of the data. Data are routinely released to fisheries staff of the Florida Marine Fisheries Commission, NMFS and the South Atlantic and Gulf of Mexico Fishery Management Councils. Access to confidential data to other groups is made difficult, and may require a court order for release of the data.]

QUESTION: Is there an interactive retrieval process so that a researcher can directly access the data?

ANSWER: No. It has been discussed, but there is nothing like that yet.

QUESTION: How much does the whole program cost?

ANSWER: For the 1992 budget, the cost of personnel and operation is about \$550 thousand. [There are staff not paid directly from saltwater products license funds who contribute to the operation of the program. Additionally, the costs associated with the Licenses & Permits Section and the Office of Fisheries Management Services (which conducts audits) are not included in the costs quoted above.]

QUESTION: Is there a license required for the aquarium industry?

ANSWER: Yes. There is the Marine Life endorsement to the saltwater products license which a harvester must possess, and they may need to qualify for the restricted species endorsement to harvest many of the aquarium trade species.

QUESTION: Is live rock harvested from state waters?

ANSWER: No. [Only from federal waters at present. There may be leased bottom areas in the future available in state waters intended for the culture of live rock. Quarried rock from other areas on land may be placed in the leased areas for later collection. The mechanics of the leased areas and enforcement of collecting rules is still being developed.]

QUESTION: How much live rock is landed from federal waters?

ANSWER: Roughly 850,000 pounds. [In 1992, about 800,000 pounds were reported. The amount reported for 1993 is a little higher.]

QUESTION: If a dealer runs out of tickets, do they call the Department and request more?

ANSWER: Yes.

[The Department of Natural Resources (DNR) was merged with the Department of Environmental Regulation to become the Florida Department of Environmental Protection (DEP) in 1993.]

TEXAS COMMERCIAL FISHERY DATA PROGRAM - PAGE CAMPBELL

In 1937, the Texas State Legislature passed a law mandating the Texas Parks and Wildlife Department to collect statistics on the harvest of aquatic products. All dealers who purchase or receive aquatic products are required to file a report. At the time the law was passed, it related to seafood. The law has since been amended to include all aquatic products. The program objectives were to determine the weight and value of aquatic products landed in Texas, and to publish the results in order to assist in the management of fisheries. The Monthly Marine Products Report (MMPR) was established to achieve the program goals. The principal products include shrimp (89%), crab (6%), oysters (3%), and finfish (2%). Under this program, licensed dealers who purchase or receive aquatic products from commercial fishermen, including bait and inland dealers, must report.

QUESTION: If a Texas boat is required to fill out a federal log book for red snapper or mackerel, do they also report through the MMPR?

ANSWER: Yes.

QUESTION: What percentage of the shrimp landings is reported by the NMFS?

ANSWER: All of it.

Reporting does not include individual weights, catch rates, crew size, etc. Related to conversions, they are done internally in the computer program. For instance, stone crab are reported in claw weight, but are converted to whole weight. The report form has three copies. One comes to the Department and one is the blue copy for recording oyster landings. Oyster dealers are required to pay one dollar per barrel of oysters.

The data from the report forms are edited, entered on the mainframe computer, and stored on tape, which is transferred to the NMFS. One strength of the MMR system is that it is relatively cost effective and is valuable in monitoring long term trends. There are weaknesses, including the fact that certain data elements are not provided. Restaurants are not required to report, and there are a lot of snapper and grouper sold to the restaurant market. This volume of fish does not get reported. There is also the question of the validity of self reporting from dealers. It is likely that dealers could underreport to extend quotas. Quality control is difficult. The Department is currently looking into improvements such as using more personal contacts with the industry, establishing a quality control system, trying to get greater commitments to the program by all participants, and seeking additional funding to increase the data collection and quality control.

QUESTION: Why do the restaurants not report product which they purchase?

ANSWER: The law does not require them to report, and their lobby is strong, so the legislature has not seen fit to amend the law to include them.

QUESTION: Why can't the Department make them buy a dealers license to settle the problem?

ANSWER: The restaurant lobby would not agree to that.

QUESTION: Then it is legal for restaurants to buy product directly from a fisherman with no reporting?

ANSWER: Yes.

QUESTION: There is a Texas species code on the reporting form. Does Texas convert codes?

ANSWER: The data are sent to the NMFS, and conversions are made by them.

QUESTION: Isn't there a specific program for collecting shrimp data in Texas?

ANSWER: Texas had an intercept program that ran for about four years. In that program, sites were randomly selected and intercept interviews were conducted for shrimp and finfish. The analysis of the data is not complete. There was also a concern related to sample sizes.

DISCUSSION: There is also a problem related to out-of-state dealers purchasing product from a fisherman. In that event, the data go unreported. That individual should be a licensed dealer, and should report, but that hasn't happened. Other states experience similar problems.

NATIONAL MARINE FISHERIES SERVICE - HEADQUARTERS OFFICE - PAUL ANNINOS

The topic of the talk is the National Marine Fisheries Service's Fisheries Statistics Strategic Plan (FSSP) and the Interregional Data Base Design Project. Both initiatives are in the earliest stages. Regarding the FSSP, the Regional and Center Directors of all five NMFS regions have endorsed the project. It is also a high priority of the NOAA Assistant Administrator for Fisheries, Dr. Bill Fox. The initiative is to chart a course (i.e. develop a strategic plan) for the NMFS fisheries statistics program by determining the current status, a direction for the program to move for improvement, and how to get there. In an initiative such as this, many times the agencies involved find that the process through which they go to devise the plan is more important than the plan itself. The plan can be changed, but the process is important in that it provides an ongoing mechanism for planning. Some of the important issues for consideration include data gaps or inconsistencies, multi-fishery management, economic data, social data, data base compatibility, confidentiality, law enforcement, weigh out programs trip interviews, system reviews, duplicate reporting, and ITQ management.

Strategic planning must be done with an understanding of the surrounding environment, and undeniably the environment of fisheries management has changed in recent years. Many agencies are looking into ecosystems management along with limited access systems, new technology, and an emphasis on social and economic impacts. All these things constitute the fisheries environment, and require planning to accommodate. Agencies must determine what the uses of and needs for data are, and how they apply to management. The NMFS will determine short and long term funding needs, work toward uniform, agency-wide standards, increase the ability of the users to access the data, and increase the efficiency and effectiveness of the NMFS statistics program.

With regard to extra-NMFS involvement in the planning process, the NMFS believes that the states, interstate commissions, and councils should be integrally involved in the FSSP, not brought in at the last minute as a review and comment component. It must be understood that the NMFS has a very clear mission, with agency goals and objectives, many of which are not necessarily the same as the states; however, the states, interstate commissions, and councils are primary clients of the NMFS, and as such, must be included in the planning process.

The unit of action for the FSSP is the region. The best way for the states to interact with the FSSP is to do it through their regional office involvement in the process. The current workshop (ComFIN) for commercial statistics is an ideal way to speak as a unit to the NMFS. A national plan can get complicated when it must consider the northeast which is different from the southeast, both of which are different from the Pacific. The Pacific Fisheries Information Network (PacFIN) keeps detailed vessel files on every vessel in the fisheries in that region. That indicates that the FSSP cannot give everyone everything that they want. It must be broad enough to encompass a wide diversity of needs.

The NMFS first step is the establishment of the Steering Committee that will be comprised of a management and a science representative from each region, for a total of ten people. The members of the Steering Committee will be in charge of the regional planning portion of the project, and will chair the Statistical Review Teams from each region. Those teams will be comprised of fisheries statisticians, fishery managers, economists, stock assessment biologists, etc. These Teams will be the first groups to come up with problems, issues, and needs for their respective regions through workshop formats. That work will result in five draft regional plans. The NMFS will seek out the common denominators among the plans, as well as the significant differences. The national plan will then arise from an amalgamation of the five regional plans.

DISCUSSION:

There was a great deal of concern on the part of the states regarding the possibility that the NMFS will develop its strategic plan and will hand it down to the states and say "here it is." The general consensus was that with the Southeast Recreational Fisheries Information Network [RecFIN(SE)] in place and the Commercial Fisheries Information Network (ComFIN) being initiated, the states and councils will have ample opportunity to input the NMFS process. **It was also agreed that the ComFIN process should proceed as the RecFIN(SE) proceeded, and that the time line for ComFIN should parallel the NMFS process.**

Regarding the Interregional Data Base Design project, this project addresses how data are managed, shared, and analyzed with a region. It is a data management standardization project which arose from field activities, in that the NMFS Regional Data Base Administrators (RDBA) found that it is difficult to share data between regions and within a region. Also of importance is that there are a number of states within any given region that may be doing business in completely different ways. The RDBAs requested

that their respective Center Directors initiate an agency-wide evaluation of the data base consistency (or inconsistency) issue, especially in light of IT-95, which is a NMFS computer hardware upgrade initiative. The concept is that since the agency will be using the same hardware and software nation-wide, shouldn't the regions look at standardizing as much as possible the management of data bases. This is not an effort to create a national data base, but rather an effort to allow efficiency and effectiveness of sharing of data among regions.

The project will be managed out of the Northeast Region by a systems design/analysis specialist. Each RDBA has selected one representative per region to work on the project. The objective of the Interregional Data Base Design Project is to advance uniform, nation-wide procedures for the collection and management of fishery dependent statistics. Success of the project will depend upon involvement from the regional, field, laboratory level including fishery scientists, statisticians, economists, and sociologists who are actually working with data every day. It is important that the agency take advantage of the IT-95 initiative to provide for fourth generation software, planning for the future, and making provisions for the development of a true relational data base. This is vital in order to be able to see relationships of data within, between, and among regions, to get down to the data element level, and develop a data dictionary. The new CD-ROM technology will allow downloading of data bases from region to region cheap and easy.

Thinking about just within the Southeast Region, there are a number of consistency issues that have already been identified, for example the log book, observer, and CSP programs are inconsistent with each other. There needs to be consistency in data collection standards, data editing standards, quality control standards, and documentation of data sets. The Headquarters Office has begun a "white paper" specifically on coding issues, still in draft form. This paper includes a summarization of all codes used in the NMFS, nation-wide. These codes will be analyzed, identifying the benefits and drawbacks of each, and recommendations will be made on the best coding system to use. The intent is not that everyone must use the same coding system, but within the NMFS there should be a greater degree of consistency. Conversion codes, or look-up tables will allow converting codes in the event that an agency has a different coding system. Similar "white papers" will be developed for species, gear, effort, water body of harvest, GIS potential, and land area codes. There are others, but those will provide an idea of how the effort will progress.

RECOMMENDATION: It was recommended that the group develop a detailed data dictionary, which identifies the existing state and federal data bases down to the system level and identifies data elements.

There is another document produced by the Headquarters Office that provides a rationale for an interregional data base design and for standardized coding systems. Also included is a rationale for consistency in confidentiality. That document should be useful to the ComFIN process.

NATIONAL MARINE FISHERIES SERVICE - SOUTHEAST REGION -
JOHN POFFENBERGER

The first program discussed is the Southeast State-Federal Cooperative Statistics Program (CSP). There are four major components of the CSP. The first is the General Canvas statistics, which is monthly landings, price, and value. The data are collected from dealers, primarily in two ways: The first is a port agent based system where state and/or federal employees acquire monthly summaries directly from the dealers, and the second is mandatory reporting of dealers by state law. Following acquisition of the monthly summary, the port agents assign or estimate catch area, distance from shore, and gear information. That information is then put into the standard fifty character record format.

The second component is the Gulf of Mexico Shrimp data collection program. It is designed to provide information on the amount and value of shrimp that are landed, by size and species, for individual fishing trips. Fishing effort and location information are collected for a sample of the trips by interviewing the captain or crew. With the exception of parts of Mississippi and Alabama, all data are collected by port agents employed by the National Marine Fisheries Service.

DISCUSSION: When port agents collect landings data, i.e. pounds, price, species and size composition, from dealers, they estimate (assign) a location and depth for (to) those landings data. This information is based on the port agents' knowledge of the fishing patterns of the vessels that land at the ports in their respective areas. Some concern has been raised that information derived in this manner may not be useful.

COMMENT: That is true. There was a meeting in Galveston during the summer of 1992 to discuss the process of estimating fishing effort. The issue of assigning data related to effort estimates was discussed there. It should be noted also that accurate effort data are needed to provide accurate estimates of bycatch, which is currently a particularly important issue.

The third component is the South Atlantic Shrimp data collection. It is designed to provide quantity and value of the South Atlantic shrimp fishery, and its contribution to the national income. North and South Carolina provide weekly summaries including number of trips from which are derived estimates of catch per trip. Georgia collects data from dealers using port agents.

QUESTION: Is there any interest in devising a study to evaluate the accuracy of port agent data?

ANSWER: Yes, that is a point of interest, and has been raised by port agents themselves.

The fourth component is the collection of bioprofile data, known as the Trip Interview Program (TIP). TIP data collection attempts to obtain more detailed information on the catch and fishing effort for individual trips. It is also the program through which most of the length frequency data are collected.

Another NMFS data collection program that has been ongoing for at least two decades is the effort to keep track of vessels and boats that actively fish within the Southeast Region. There are two aspects of this data base, one being tracked through U.S. Coast Guard (USCG) documentation, and the other smaller craft identified by boat number. The USCG documented data base identifies a vessel or boat by number so that it can be tracked throughout a year regarding where it fished and the type of gear used. Port agents also provide such information as the fishing characteristics, type and quantity of gear, and how many crew. With regard to the smaller craft, it is merely a count of the number of craft by year. There is no identification number, so the craft cannot be tracked, and there is no way of knowing if there is duplication of boats from one area to another. There is a great deal of concern over this particular file, and it will be the subject of review in the near future.

The NMFS manages a log book program for sport fishing on large pelagic fishes. Recently, the South Atlantic and Gulf of Mexico Fishery Management Councils have suggested that log book programs be established for Gulf reef fish, south Atlantic snapper and grouper, red fish, and shark. The NMFS is using log books for a number of fisheries, but they are finding that they are getting a lot of useful information from log books, especially since they have integrated the log books with the permit system as a means of encouraging fishermen to report. This is especially useful for information on individual trips, species composition, catch by gear, or at least types of gear, and fishing location. Concomitant with the logbook program, federal regulations require that every vessel or boat that fishes in a federally managed fishery must apply for and be issued a permit for each fishery. Such a permit system is useful in providing a survey population and in getting information on vessel characteristics. There is an attempt to amend the Magnuson Fishery Conservation and Management Act to allow the NMFS more authority to collect fees to offset management of permits for EEZ fisheries.

In the Southeast Region, there are two major observer programs, the shrimp bycatch and large pelagics programs. The intent for the shrimp bycatch observer program is to get better information on the composition and magnitude of shrimp bycatch, but also to get information on the temporal and spatial distribution of all species caught. There are two components of the shrimp bycatch observer program. The NMFS has five observers and the Gulf and South Atlantic Fishery Development Foundation has seven observers. The purposes of the two components are different, but they are completely coordinated, using the same protocol and training.

QUESTION: Are the observers federal employees?

ANSWER: The NMFS observers are federal employees, and the Foundation observers are individuals hired by the Foundation.

QUESTION: Do the observers operate in state or federal waters?

ANSWER: The fishermen agree to take the observers wherever they are going to fish. It could be state or federal or state and federal waters on any given trip.

The other observer program is for large pelagics. As with the shrimp program, the program is aimed at getting specific information on the catch of all large pelagics, not just swordfish and tunas. It includes some sharks and billfish. Gear information is also acquired. Currently there are six part time employees and four others under contract to the agency.

DISCUSSION: These data should be collected with the intent of integrating them with other data bases, rather than collecting the data and expecting to integrate them after the fact. Any new or additional data collection activities, such as new log books or other, should be designed up front with the understanding that the resulting data are part of a larger data picture. The basic program provides the General Canvas information, log books provide more detailed individual trip information, and the port agents who collect TIP data should also be aware of who is submitting log books. In the event a port agent interviews a log book fisherman, he/she should review the log book with them to assure that they are doing it right. Then the observers are collecting more detailed data on catch, effort, gear, and fishing areas. All these efforts should be designed so that they can be integrated.

There are also opportunities to acquire observer data on fisheries through the marine mammal observer program. There are very active programs on the North Atlantic and Pacific coasts. The primary purpose is to document the extent and frequency of interactions between fishermen and marine mammals; however, the observers also collect fisheries data. In some cases, fisheries scientists have become reliant upon fisheries data from marine mammal observers, while at the same time that observer program is being cut back. On the Pacific coast, the fishermen pay for the observer program, whereas on the Atlantic the NMFS pays for the program.

QUESTION: What is the difference between ComFIN and the CSP?

ANSWER: ComFIN is an initiative to look at commercial data in total, and how existing and potential data collection and management programs can be integrated to provide overall coordination and cooperation among agencies. The CSP is an existing commercial data collection and management program that has been evaluated and found in need of certain improvements. The CSP is a component of ComFIN.

QUESTION: Is ComFIN related to fishery dependent data only?

ANSWER: Yes; however, all fishery dependent efforts should take into account fishery independent data collection and management activities.

ComFIN MISSION STATEMENT, GOALS, AND OBJECTIVES

The following is a Mission Statement and a set of broad goals and objectives of the Commercial Fisheries Information Network (ComFIN).

A. Mission Statement

The mission of the Commercial Fisheries Information Network (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 Southeast Region and to support the development of an interregional program.

B. Goals and Objectives

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

Objective 1 To establish a ComFIN(SE) Committee consisting of signatories or designees of the ComFIN Memorandum of Understanding to develop, implement, monitor, and evaluate the program

Objective 2 To complete during the first year a Strategic Plan that outlines policies and protocol for the program

Objective 3 To develop annual operations plans, including identification of available resources, that implement the plan

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

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

Goal 2: To implement a coordinated state/federal marine commercial fishery data collection program for the Southeast Region.

Objective 1 To characterize the commercial fisheries and identify the required data for each

- Objective 2 To identify environmental, biological, sociological, and economic data elements required for each fishery
- Objective 3 To identify and determine standards for data collection, including statistical, training, and quality assurance
- Objective 4 To identify and evaluate the adequacy of current programs for meeting ComFIN(SE) requirements
- Objective 5 To coordinate, integrate, and augment, as appropriate, data collection efforts to meet ComFIN(SE) requirements
- Objective 6 To evaluate and recommend innovative data collection methodologies and technologies

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

- Objective 1 To identify the location and administrative responsibility for a centralized ComFIN(SE) data management system
- Objective 2 To evaluate the current hardware, software, and communication capabilities of program partners and make recommendations for support and upgrades
- Objective 3 To design, implement, and maintain a marine commercial fishery data management system to accommodate fishery management/research and other needs
- Objective 4 To develop standard protocols and documentation for data formats, inputs, editing, storage, access, transfer, dissemination, and application
- Objective 5 To identify and prioritize existing historical data bases for integration into the centralized data base
- Objective 6 To evaluate and recommend innovative, cost effective information management technologies
- 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 interregional 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 interregional program planning

Objective 2 To coordinate ComFIN(SE) with other regional programs

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

The mission statement, goals, and objectives outlined above are preliminary, and constitute the first effort to establish guidelines for a comprehensive, state-federal, coordinated data collection and management program for the commercial fisheries in the Southeast Region.

RECOMMENDATIONS

- 1) Pursue completion of work on reorganizing and enhancing the State-Federal Cooperative Statistics Program (CSP) before proceeding with the development of ComFIN(SE). The development of ComFIN(SE) will evolve out of the CSP.
- 2) Complete a Strategic Plan for the CSP that provides for an organizational structure, a coordination function, and broad goals and objectives in time for the fall meetings of the interstate commissions.
- 3) Following presentation of the plan at the interstate commission's fall meetings, seek endorsement of the State Directors, either through a Memorandum of Understanding or some other mechanism, to continue cooperating in the CSP using the new plan and organizational structure.
- 4) Recognize the distinction between operations plans for the Southeast Cooperative Statistics Committee (SCSC) and operations plans for actual data collection and management.
- 5) Develop an operations plan for the SCSC for 1994, and develop operations plans for data collection and management activities at appropriate time.
- 6) Charge a work group with beginning to address the issue of uniformity of data element definitions and comparability of data collection methods and procedures.
- 7) Charge a work group to develop a data dictionary.
- 8) Charge a work group to assess the computer hardware and software capabilities of the CSP partners, and make recommendations for upgrades where necessary.
- 9) Charge a work group to assess quality control measures for existing programs.
- 10) Hold the next CSP meeting in late July in Miami.