

**Overview Of National Marine Fisheries Service  
Activities and Interactions  
Applicable to Caribbean  
Marine Resources**

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The mission of the National Marine Fisheries Service is: "Achieve a continued optimum utilization of living marine resources for the benefit of the Nation." We view our cooperative efforts with the nations of the Gulf and Caribbean as an integral part of this mission.

This mission is derived from the more than 100 federal laws which relate to living marine, anadromous and commercial fresh water fisheries resources and their habitats. Significant among these laws are the American Fisheries Promotion Act of 1980, the Magnuson Fishery Conservation and Management Act of 1976, the Fish and Wildlife Act of 1956, the Endangered Species Act of 1973, the Marine Mammal Protection Act of 1972, the Saltonstall-Kennedy Act and sections of the Merchant Marine Act of 1936.

Our mission recognizes living marine resources as valuable renewable resources. The renewable nature of these resources means that substantial benefits can be realized through assuring their continued maximum productivity and their optimum utilization. Achieving optimum utilization of living marine resources includes protecting and conserving marine mammals, endangered or threatened species, and the habitat which is the foundation of resource productivity. It also involves the creation of economic benefits and the guardianship of basic resource values. Benefits include: jobs, profits, subsistence, recreation, a better nourished populace and a healthy ecosystem.

In carrying out our mission the National Marine Fisheries Service (NMFS), and its predecessors, have been involved in the exploration, research, development - and most recently - management of living marine resources of the Western Central Atlantic for many years.

While some of the activities have been in the Caribbean Sea and are directly applicable to that area, projects conducted in adjacent regions are also pertinent to the Caribbean due to the existence of similar environments and species, and, often, related stocks. Information and techniques derived from studies of similar fisheries of the South Atlantic and the Gulf of Mexico coasts can be transferred to solving fishery problems in the Caribbean area.

Through its role to provide biological and technical information to the Caribbean Fishery Management Council pertinent to fishery management plans, the Southeast Fisheries Center of the National Marine Fisheries Service has developed information on reef fishes, pelagic fishes and spiny lobsters that is useful beyond the immediate area of the Fishery Conservation Zone that surrounds Puerto Rico and the Virgin

Islands. Together with the Caribbean Council, we sponsored a Workshop on the Biological Bases for Reef Fish Fishery Management, held 7-10 October 1980 in the Virgin Islands. The results of the Workshop are pertinent to understanding reef fish communities in order that appropriate management of these stocks can be initiated.

Cruises by National Oceanic and Atmospheric Administration (NOAA) ships to the Caribbean Fishery Management Council area were conducted to assess abundance of deep water reef fishes and to obtain samples for age and growth studies. In the same general location pelagic longlines were fished to assess the availability of tunas and billfishes. Fish attractant devices were developed and evaluated as concentrators of pelagic fishes. The latter technique may have potential for improving the fishing success rate of artisanal fishermen.

Additional projects are not specifically tied to the Caribbean Council but do concern the Caribbean area. Ciguatera is a continuing problem, particularly for Caribbean island nations. We are coordinating NMFS research on ciguatera with research by other institutions. The emphasis is on development of a specific test to detect ciguatera in fish.

Our Southeast Regional Office has initiated or partly supported several projects in the Caribbean. Exploratory surveys have been conducted in waters surrounding Puerto Rico and the Virgin Islands. One survey indicated that at depths of 150 to 300 fathoms, snappers, groupers and dogfish have the greatest potential for commercial production. For bottom longlining for these species, a pole system has been developed which enables the longline to settle rapidly to the bottom and minimizes gear entanglement on rough bottom. Pelagic longlining near the Virgin Islands indicates a potential for tunas, swordfish and sharks. In Puerto Rico, an objective has been to re-establish local conch populations through seeding of laboratory-reared conchs into depleted natural habitats. Conch have been successfully reared in the laboratory and there have been field releases of juvenile conchs. The mortality and growth of released conchs is being examined. In an attempt to find a replacement for the traditional salt codfish used as food by Caribbean people, we are investigating low-cost fish substitutes for export to the Caribbean area.

In addition, there are a number of international research arrangements focusing on living marine resources of the Gulf and Caribbean in which we actively participate. For example, we are heavily involved in the International Commission for the Conservation of Atlantic Tunas (ICCAT). Under ICCAT, we are involved in various research tasks jointly determined by the Commission. One of these efforts involves our 5-year participation in the tagging of skipjack tuna. In the area of bluefin tuna research, we are striving for greater accuracy in reporting on these migrating schools. Doing so will provide a more refined tool for the management of these international stocks.

As a member of the Western Central Atlantic Fisheries Commission (WECAFC), we assist Caribbean area nations in fishery programs. We maintain the FAO/United Nations Development Program

Fishery Project data base and an additional data file on the results of NMFS exploratory fishing in the Western Central Atlantic, and provide data service on request by Commission members. Support was provided to the Commission for a cooperative international mark-recapture program to determine shrimp migration and growth off northeast South America (Brazil, French Guiana, Surinam and Guyana). To assist this project, we provided planning and technical assistance, coordination, training, equipment and data analysis.

The Western Atlantic Turtle Symposium (WATS), sponsored by the Intergovernmental Oceanographic Commission Association for the Caribbean and Adjacent Regions (IOCARIBE) and supported by the Western Central Atlantic Fisheries Commission was held 16-23 July 1983 in Costa Rica. The objective of the Symposium was to assemble information on sea turtles, assess the status of knowledge and make recommendations for future research necessary for informed management. Many of the participating countries were from the Caribbean area. We contributed to the planning and coordination of the Symposium and associated field activities, and provided support in preparing the Symposium publications.

In cooperation with Mexico (Mexico-U.S. Cooperative Research Program - MEXUS Gulf), studies were conducted on shrimp, sea turtles, ichthyoplankton, pollution, mackerels and demersal fishes. Shrimp mark recapture studies in the western Gulf of Mexico, to determine the degree of transboundary migration (interchange) between the United States and Mexico, provided information for management of shrimp stocks. Sea turtle nesting beach surveys were conducted from the southeastern United States to Mexico's Caribbean coast, and young turtles were "head started" and released in the western Gulf of Mexico. Ichthyoplankton surveys in the Gulf of Mexico provided estimates of bluefin tuna spawning stock size and also served to increase knowledge of the ecology of various fish species in the Gulf and Caribbean.

Scientists from Mexico and the NMFS cooperated aboard the R/V RESEARCHER in the collection of samples from the IXTOC I oil spill off Mexico. Cooperative mark-recapture studies were conducted to determine if stocks of coastal pelagic fishes (primarily Spanish mackerel and king mackerel, which are fished off Mexico and the United States) are single or separate stocks. Cooperative studies of demersal fishes off Mexico have provided information on the distribution and abundance of deepwater snapper, grouper and tilefish; and biomass estimates of porgy and tomate.

Let me stop here. This list of cooperative effort could go on much longer. I have only touched on some areas where we jointly cooperate for the benefit of all nations bordering the Gulf and Caribbean. The National Marine Fisheries Service is proud to be a partner with you.

Legislative mandates and executive policies require us to continually reexamine our role in relationship to other federal agencies, the states, foreign nations and affected domestic constituencies. It is clear that there are many challenges ahead. A continued, mutually beneficial, cooperative relationship between the United States and the nations of the

Gulf and Caribbean as illustrated by meetings such as this must be maintained. We look forward to meeting the challenges of today and tomorrow with you.