

Outlook of Puerto Rico's Commercial Fisheries Development

FELIX IÑIGO AND ROLF JUHL
Division of Fish and Wildlife
Department of Agriculture
San Juan, Puerto Rico

Abstract

A formal commercial fishing development program was initiated in 1941 with joint efforts by the Puerto Rico Department of Agriculture and the U.S. Department of the Interior. This program included studies of marketing and production methods, exploratory fishing and establishment of fishing centers. Most of these activities ceased soon after the war, at which time a fisheries research laboratory operated by the Department of the Interior was ceded to the University of Puerto Rico at Mayaguez.

The Puerto Rican Government, however, continued promoting commercial fisheries to a limited degree under various projects, by making available credit facilities and vocational training to fishermen and by constructing improved storage facilities.

In 1966 activities were expanded with the advent of the Fisheries Research and Development Act of 1964, PL 88-309. Projects started in 1966, and continued and expanded this year, include: Fisheries Statistics, Gear Research and Testing of Fishing Boats, Construction of a Commercial Fisheries Laboratory, and Construction of Fishing Port Facilities. In succeeding years it is planned to include bottom topography and aerial surveys, technology and applied fisheries training. Since the per capita consumption of fishing products is about 30 pounds, of which only a small part is taken locally, continued expansion of Puerto Rican fisheries is of vital importance.

SUMMARY OF PAST AND ONGOING ACTIVITIES

COMMERCIAL FISHERY DEVELOPMENT, as a function of the government, began in 1941 under the Department of Agriculture. This was initiated through interest in obtaining larger supplies of fish during the war years and to implement a program for the post-war period.

From its inception, the program leaned toward ways and means of upgrading commercial fisheries practices. To start, a fishery research laboratory was constructed in Mayaguez through a cooperative agreement with the United States Department of the Interior. It was used as a base to conduct marketing and processing studies; carry out exploratory fishing investigations; and establish various fishery equipment centers.

The government also built and operated two centers to buy, store and freeze fish to help market the increased fish production.

At the end of the war, this program was transferred to the Puerto Rican Agricultural Development Corporation, PRACO, a public agency established for the development of agriculture, including fisheries. Although the previous fishery program had been designed to benefit all segments of the industry, the new administration gave greater emphasis to high seas fisheries, which had a

higher production potential, but depended on the use of larger and costlier ships. For this, PRACO acquired a converted tuna clipper, *REINA DEL CARIBE*, which even made fishing trips to the Grand Banks, to test the possibility of establishing a codfish industry in Puerto Rico. This venture was not successful and the ship was assigned to fish in local waters until 1947 when the program was terminated. At the same time, the United States Government closed the fisheries laboratory and ceded the facilities to the College of Agriculture at Mayaguez.

After PRACO, fishery development was gradually resumed and once again assigned to the Department of Agriculture, directly under the Division of Fish and Wildlife. For several years, this division has been actively concerned with four commercial fishery assistance projects. These are:

Fishery Gear Distribution Centers

Here the fishermen can acquire items of good quality at reasonable prices. This project is now under the Agricultural Services Administration.

Fishery Credit

This project was administered jointly by the Department of Agriculture and the Government Development Bank, and now by the Agricultural Credit Corporation. In seven years of operation, more than 900 loans have been granted for a total of \$500,000. This has contributed to the motorization of over 65% of the local fishing boats.

Construction of Fishing Port Facilities

This project is designed to provide the fishing centers with storage lockers close to the beach for equipment and fishing gear; space for fish storage; piers for loading and unloading fish; and, space for beaching boats. Under this project 12 fishing centers have been upgraded. Plans call for termination of the project in 1970 with completion of work on at least 18 additional centers.

Training of Fishermen

This project was started in 1958 and is administered by the Department of Public Education. Its aim is to train fishermen in the use and operation of motor boats and principles of navigation. Short training courses have been given to over 600 fishermen from various fishing ports.

During the 7-year period from 1959 to 1966 these projects have contributed to the increase in annual fresh fish production. Local landings during this period rose from 5.5 million pounds to 11 million pounds per year. However, much more is needed. Substantial progress will have to depend on commercial fisheries research and development, such as upgrading fishing gear and harvesting techniques, expansion of fishing areas, improvement of processing and marketing, fishery economics and technical training of fishermen.

Some of these activities are in the process of development and implementation through a cooperative Federal-State program under PL 88-309, the Commercial Fisheries Research and Development Act of 1964. Under the law, six projects are being carried out this fiscal year. A brief description of each follows.

Gear Research and Testing of Fishing Boats

The objectives of this project are to determine the most suitable commercial fishing gear and boats needed for upgrading the local commercial fisheries.

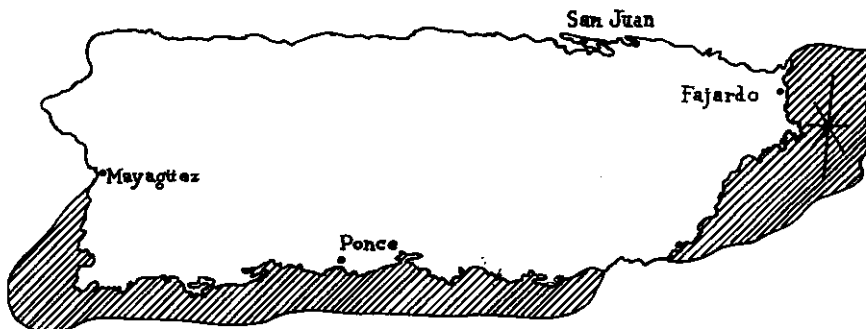


FIG. 1. Puerto Rico showing major fishing areas (shaded) and present exploratory fishing center (asterisk).

Additionally, new areas will be assessed with the view of expanding the present fishery beyond the traditional fishing grounds.

The work is carried out simultaneously with demonstration of the vessels and gear, initially to fishermen based in the larger fishing centers of the island. Figure 1 indicates the location of these fishing centers. Two vessels will be used for the proposed work, a 37-foot Florida lobster boat, and a specially designed 25-foot beach landing craft, the latter to operate in open areas where boats must be beached every day. Currently, the STAHL, the 37-footer, is operating off the east coast of Puerto Rico (Fig. 1). Plans are to completely circumvent the island in another 18 months, operating out of each center for a period of approximately 3 months. The equipment to be demonstrated and tested includes mechanical snapper reels, fish and lobster pots, gill nets and trolling gear. A white-line fish finder and hydraulic line hauler are essential accessories.

Design and Construction of Improved Fishing Boats

This project calls for building a prototype 25-foot boat of increased carrying capacity, shallow draft for beaching in open areas, simple low cost construction and adaptability to various fishing methods. The boat is now under construction and will be diesel powered and equipped for snapper fishing, lobster and pot fishing, and trolling.

Fishery Statistics

The objective of this project is to design and implement a statistical system which will provide current information on the Puerto Rican fishing industry. In addition, a marketing survey will be made to determine requirements for the design of an island-wide marketing project. It is expected that this will eventually lead to the establishment of a statistics and market reporting service of value not only to the local industry and government, but also to other Caribbean islands and the United States.

To provide compatible data, the regional and central offices of the U.S. Bureau of Commercial Fisheries were consulted in the design of the statistical system. The UNSF Caribbean Fishery Development Project has provided assistance in marketing studies.

Construction of Commercial Fisheries Laboratory

This laboratory will be constructed in the Mayaguez area on the west coast of the island. It will provide facilities for exploratory fishing gear research, fishery technology, marketing and statistics and fishery biology related to commercial fisheries. In addition to laboratory facilities, docking space will be available for the exploratory fishing project vessels.

Construction of Fishing Port Facilities

This supplements and expands the project previously described and carried out by the Department of Agriculture to provide the fishing centers with docks to facilitate loading operations; storage lockers for gear and equipment; space for storage and handling of fish, including ice making units; and repair shops. Nine locations have been selected for construction this year.

Coordination

This project provides planning, guidance and direction to the PL 88-309 program.

THE FISHING INDUSTRY

Two widely contrasting segments make up the commercial fishing industry in Puerto Rico. One segment includes a fleet of large modern vessels and accompanying sophisticated shore installations, combined into an efficient highly mechanized tuna industry. The other segment includes a large number of small, somewhat obsolete day boats which operate inshore and sell their catches through a variety of fresh fish distribution channels.

The tuna canning industry started here in 1953 with construction of a cannery in Ponce, under incentives provided by the Puerto Rican Industrial Development Program. Fish was supplied to the cannery by United States flag vessels operating in the eastern central Pacific. Between 1960 and 1963 three additional tuna canneries were built in Mayaguez. In terms of fish processed, production has risen since 1953 from approximately 25 tons per day to over 450 tons. Total tuna landings (round weight) in 1966 rose to 110,000 tons, valued at over \$30 million. This year, production figures are expected to be even greater. This industry is by far the largest food processing enterprise on the island, both in volume and in value.

Currently, about 16 United States flag vessels supply one-third of total landings. These vessels, all seiners, can carry from 350 to over 1,000 tons of fish, have an endurance of 60 days or more, and a radius of operation of over 10,000 miles. The average fish production per fisherman on these vessels is about 200 tons, considered the highest in the world for high value fish. Essentially the main fishing area of the Puerto Rico based tuna fleet is still the eastern Pacific, with limited fishing efforts conducted in New England and West African waters.

The importance of this industry to the island's economy is well known and cannot be overemphasized. Its growth and prosperity depends largely on a continuing, and, hopefully, increasing supply of fish. Limitations imposed by tuna conservation measures and foreign restrictions in traditional fishing grounds have created a need for developing other tuna fishing areas. The Caribbean and adjacent seas and the eastern Atlantic are being examined as alternate grounds. Costly and time consuming explorations must be con-

ducted to verify the potential. On this the Department of Agriculture is willing to assist the industry, and exploratory fishing projects are being considered.

In local waters approximately 1,300 fishing boats are currently engaged in the commercial fisheries. These are essentially coastal fishing craft of simple construction, ranging in size and type from 14-foot row boats to 40-foot sloops. However, the majority lie in the 16- to 20-foot size. Over two-thirds of these are motorized, but largely by outboard motors, and lack mechanical labor saving equipment.

There are an estimated 2,800 people engaged in the local fisheries. A large portion of these are part-time fishermen. Conservative figures for 1965 show landings of 11 million pounds, valued to the fisherman at \$3 million.

The most important fishing gear is the fish pot, which numbers over 12,000. However, a variety of other gear is also used, including haul seines, gill nets, turtle nets, set lines, cast nets and trolling lines.

Assuming that 2,000 fishermen take about 90% of current annual landings, or 10 million pounds, the catch per fisherman is only 5,000 pounds. This low productivity indicates, among other things, limited catch rates owing to scarcity of fish, inefficiency in harvesting methods or lack of knowledge about availability of the resource. We strongly believe the last two apply here.

Puerto Ricans are big fish eaters. The per capita consumption (whole fish basis) is between 66 and 67 pounds, which totals approximately 170 million pounds per year. With the continuously rising per capita income, Puerto Ricans are consuming more and more protein foods including fresh fish. As a consequence food fish imports, excluding tuna, have increased from \$6 million in 1951 to over \$15 million in 1965. This increase does not include the consumption of canned tuna produced locally, which is estimated to be about 25,000 cases or 500 tons of whole fish per year.

THE OUTLOOK

The creation of a viable commercial fishery in Puerto Rico is not only possible, but highly desirable. The wide gap between local fish production and fish consumption and the ever increasing demand for fishery products offer a worthy challenge. The outlook is bright; the growing awareness and interest shown by the commercial fishermen and government are sparking the move toward improvement and expansion.

Nevertheless, with the knowledge available on local resources it is doubtful if the coastal and shelf areas support enough fish to supply the demand. The action projects currently in effect are designed to develop and expand coastal fisheries. The next phase undoubtedly will call for development of distant water and high seas fisheries. This will entail considerable change in the type of vessels, fishing gear used and method of operation. Assistance from the government is essential for the industry to make this change and reach acceptable levels of production. Substantial progress will have to depend in part on the projects now implemented, those planned for the future and their integration into a coordinated commercial fishery program.