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A Look At the Fisheries Potential of Panama

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Abstract

The very word "Panama" is significant as it means, in the Indian language, "abundance of fish". Over the years there have been a number of surveys to establish the kind and degree of these fisheries resources. Most of these were based largely on interviews, with some degree of at-sea effort, and perhaps a considerable modicum of hope. This paper is a report of the most recent effort to assess the fisheries resources of Panama, with its 1,200 miles of coastline, and to make certain recommendations aimed at realization of the oft-forecast but not yet adequately realized promise of "abundance of fishes".

The paper will include a brief description of the findings of this study, the recommendations for action, and perhaps most significant — the status of actions being taken by Panama to make fuller use of these fisheries resources.

Introduction

PANAMA'S FISHERIES POTENTIAL is not a subject of recent interest. In fact, the observed abundance of fish was instrumental in the naming of that country by early explorers. "Abundance of fish" is the literal translation of the name "Panama" from the Indian language. Despite this situation, it has only been in relatively recent times that the annual production from these resources has reached approximately 22 million pounds, made up of 12 million pounds of shrimp (largely exported) and 10 million pounds of anchovetas and threadfin herring now used in the manufacture of fishmeal and oil. With respect to finfish for human food there were no statistics available. Based on observation at typical fish market centers, the annual landings for this purpose were estimated at not over 4 million pounds.

For a country with approximately 1,200 miles of seacoast, this low level of production invites thoughts of what might be done to increase fish production. Perhaps this thought impelled the Panamanian Government to request the assistance of the U.S. Agency for International Development (AID) late in 1960 in a survey of the fishery resource. In any case, AID did contract with BCF for a two month project on this subject. Stewart Springer and Charles Butler conducted the study during May and June of 1961. This paper deals with the conduct and findings of the study, the recommendations for follow-up action programs, and the status of all programs undertaken to the time of writing.

Conduct of Study

As a preliminary to the visit to Panama, all available fishery literature was collected and reviewed as a source of background information. In Panama, the survey team contacted all available sources of additional information and advice, including the Panamanian Fisheries laboratory staff, the Canal Zone officials, and fishing industry officials, as well as processors, shippers, and end-users of fish and fishery products. The current Panamanian techniques of harvesting, processing, and selling fish were then studied at firsthand. This phase included some voyages with commercial fishermen, especially in the Bocas del Toro lobster fishery area, and visits to the principal fishery ports and markets.

In lieu of fish harvest statistics, the daily catches of fish were examined to gain some idea of the relative abundances of the several species of fish and shellfish available. The two fish reduction plants were visited and their operations were studied. Samples of the locally available, under-utilized anchovetas and threadfin herring were selected, packaged, frozen, and shipped to the U.S. for use in canning experiments.

The Findings

The shrimp resource was being exploited at about its maximum level. However, the fleet was badly overbuilt, resulting in a relatively small catch per unit of effort. Maintenance and repair of the shrimp vessels was being neglected, possibly because of inadequate earnings from many of them.

Very small lobster fisheries are centered in Bocas del Toro, in San Carlos, and in San Blas. In view of the successful commercial fishery for lobster on the Caribbean coast of Costa Rica and the similar ecological conditions prevailing at Bocas del Toro, this latter fishing ground seemed an especially likely place to seek commercial quantities of lobster. Other likely areas were also found on both coasts.

Anchovetas and threadfin herring were being used, at an average catch rate of 10 million pounds per year, for reduction to fish meal and oil. The shift by the California tuna fleet from bait fishing to purse seining substantially decreased the use of these fish as live bait. Local offshore stocks appeared to be adequate to sustain: a. An increase in the harvest of these fishes for reduction, b. Utilization of these species for canning, or c. Utilization of these species for the manufacture of fish protein concentrate.

Panama was importing $300,000 worth of canned sardines annually for domestic consumption. If anchovetas and herring could be canned competitively, the local resource was available for this purpose with a resultant substantial lift to the regional economy. Panama enjoyed a good market for its high quality fish meal in Western Europe. Although not all the oil was being recovered, a small local market was developing. Improvements in processing should lead to solubles recovery, with a so-called "whole" meal a likely outlet. The growing domestic poultry industry will provide an additional local outlet for some fish meal.

Panama, for many years, has imported bacalao or salted "cod" as a staple animal protein food product. There seemed a good possibility for a limited amount of commercial fishing for shark, with the flesh prepared as a salted product in lieu of the imported salt cod. The skins, fins, liver, and oil of the sharks would provide additional income to assist in making the operation

profitable. In addition, the commercial harvesting of these sharks would decrease the amount of damage to fishing gear suffered by the shrimp fishermen and others harvesting the fishery resource.

The completion of the Pan-American Highway should lead to increased tourist travel to and through Panama. People driving so many miles in sight of the ocean should be "naturals" as fish customers in local restaurants. This potential was pointed out. Fish for the fresh market was largely supplied from the last few days' catch of the shrimp vessels. Some hook and line fishing, and sporadic attempts to use more sophisticated gear for such species as mackerel, sea trout, snapper, and grouper were also reported. However, there was no dependable supply of the more sought after species. In fact the Canal Zone Commissary imported much of its inventory to be sure of an adequate and continuing supply of fish.

A start has been made on a fisheries research and management program, especially in the shrimp fishery. The National Laboratory of Fisheries has underway catch sampling, distribution and abundance studies, and the collection of catch statistics.

Panamanian businessmen were interested in expanding the industry to include the canning of tuna, titi or seabobs, and pet food. Some interest in increasing facilities for sports fishing was apparent. Experimentation with the preparation of frozen fillets from several of the locally available species had been conducted. These products, under the special conditions prevailing, were not considered to be competitive with imported products.

Recommendations for Action

A number of projects were proposed for consideration by the Panamanian Government. These were discussed with President Chiari and other interested officials. A detailed report was submitted, including estimates of costs, plant diagrams, etc. The principal projects recommended included the following: 1. An exploratory fishing program to determine the abundance to define the seasonal and geographic availability patterns, and to demonstrate the most effective procedures for the harvesting of spiny lobsters in commercial quantities. 2. A Government-sponsored project to encourage harvesting of sharks and to process and market the products of the shark fishery. 3. A fish distribution project to demonstrate preservation and transportation techniques and to demonstrate the feasibility of increased marketing of iced fish at inland centers adjacent to fishing villages. 4. A test of the suitability of anchovetas and threadfin herring as raw material for preparation of inexpensive canned fish products. 5. A strengthened Government fisheries research and management program. 6. An extension service to teach fishermen in the isolated fishing villages simple, inexpensive preservation methods (*e.g.*, salting and smoking) so that fish taken in excess of immediate demand may be saved for later consumption.

Actions Now Underway

Since the survey in May-June, 1961, there have been a number of developments that should bring about a fuller harvest and utilization of Panama's fishery resource. A brief review of the principal developments will close this report:

1. The Panamanian Government, assisted by CARE and the Alliance for Progress, has begun the organization of a fishermen's cooperative. The objectives of the cooperative are: (1) modernization of fishing procedures, (2) manufacture of ice, (3) encouragement of the use of ice aboard fishing craft and in the markets, and (4) distribution of iced fish via refrigerated truck to market centers away from the fishing villages. As a part of this project, surplus supplies of fish will be salted and dried by modern methods. The project should demonstrate the feasibility of increasing the fish harvest and of expanding the markets for quality fish and fish products.

2. The Alliance for Progress, in cooperation with the Panamanian Government, has contracted with the U.S. Bureau of Commercial Fisheries for the conduct of the spiny lobster resource study recommended by the U.S. survey team. The study is now underway. It will cover both coasts, and is scheduled to continue until about August 1, 1963.

3. The experiments to determine the suitability of Panamanian anchovetas and threadfin herring for canning were completed. Samples of satisfactory packs were shown to interested Panamanian businessmen. Plans to utilize the species for canning purposes are now under consideration. In addition, experimental packs of marinated and salted anchoveta and herring are being prepared in Panama.

4. One of the two fish reduction plants has materially improved its fish handling and processing equipment and techniques. It is now an efficient competitor in the fish meal and oil markets. Solubles may soon be recovered and added to the press cake to yield a full or whole meal.

These activities will more clearly define Panama's fishery resources and their potential and will follow-up with the means for their fuller utilization.

The Role of the Outboard Motor in Small Craft Mechanization Programs of Developing Nations

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Abstract

Beginning in 1912, O.M.C. began distributing outboard motors to aid fishermen in underdeveloped nations. Outboard Marine International S.A. was organized in Nassau in 1957. OMISA with the cooperation of CARE and FAO have obtained rewarding results in Ceylon, Puerto Rico, Jamaica, the Philippines, Ghana, and Nigeria. Current work is being done in Panama and Greece.

The use of 3 to 5½ hp. motors has allowed native sailing craft to return to port daily, thus improving quantity and quality of the catch. Maneuverability is provided for entering crowded harbors and combating tidal currents.

PARTICIPATION IN COMMERCIAL FISHERIES PROGRAMS of Outboard Marine Corporation, world's leading manufacturer of outboard engines, can in a sense be said to date back to 1912 when the parent company approached several New York concerns soliciting interest in the export of their newly-invented two-cycle outboard motor. At that time, the OMC parent firm was offering a one-cylinder,