

APPENDIX 1

SITUATION AND BACKGROUND OF THE TUNA FISHERY DEVELOPMENT PROBLEM IN THE CENTRAL AND WESTERN PACIFIC AREA

1. Situation and background

Although the tuna industry is one of the few U. S. fisheries in good economic health (value \$641 million) several major and inter-related problems are posed to threaten this viability. Briefly, these problems can be summarized as follows:

- The demand for tuna exceeds the present supply causing rising costs for raw and processed products both imported and domestic.
- The world supplies of tuna except for skipjack are already heavily exploited limiting the choices of further expansion to the skipjack resources of the western, central Pacific and Indian Oceans.
- The present international situation fosters increases in the number of boats entering already exploited fisheries causing an increase in costs and an overall decrease in productivity.
- Foreign competition for remaining future supplies of skipjack is building rapidly.
- Technical problems in gear design fishing techniques and in location of commercial concentrations must be overcome before large increases in the skipjack landings from purse seiners can be expected.

A more detailed accounting of the particular situation and problems within each of the broad categories is given in the following. These are summarized from previous reports and discussions with the industry (Appendix 2).

1.1 The demand-supply problem

World and U.S. consumption of tuna is increasing at a rate of about 3.6% per year over the years. However, in 1972 the U.S. consumption increased by more than 25%. This demand has given rise to the development of fisheries (expansion of effort) on almost every major tuna resource in the world. These existing fisheries are either at or near their maximum production with the exception of the skipjack fisheries in the Pacific and Indian Oceans. The limited supply, combined with rising demand especially for skipjack and competing markets, has led to increasing costs for the raw material and the canned products. As an example of these rising costs, during recent years the price paid per ton of skipjack to U.S. fishermen has risen from a low of \$265 in 1969 to a high of \$447 in 1973. Prices of imported skipjack delivered to the California tuna plants during the same period have risen from \$288 to \$610 per ton.

1.1.1 Resource availability

Tuna are a world-wide resource with a total catch of 1.1 million metric tons in 1971. Five species--yellowfin, albacore, bigeye, bluefin, and skipjack--comprise a major portion of the catch taken between 40° N and 40° S latitude. Skipjack tuna are the only tuna resource which is underdeveloped, and scientists estimate that world skipjack production can be significantly increased. It is anticipated that exploration and fishing industry intensity for skipjack will increase substantially by both foreign and U.S. fishing boats.

The central and western Pacific Ocean appears to have a large stock of underutilized skipjack tuna, estimates of increased yield in the range from 100,000 to 1 million metric tons. This untapped resource lies in an area of 11 million square miles, with numerous islands and atolls. The resource is presently not utilized by U.S. fisheries because they do not know how to effectively harvest mid-oceanic skipjack. Specifically, they do not know areas of commercial concentrations and whether it can be harvested with purse seines or live-bait. Purse seining by U.S. vessels in this area have resulted in unsuccessful trips probably because of the fast-moving nature of the schools, clear water, deep thermocline, behavior and size of the schools. Live-bait fishing by U.S. vessels have indicated the potential of this technique but also indicated the lack of adequate bait supplies in certain areas and identified the need to determine the profitability of U.S. -type vessels in the central and western Pacific.

1.2 Capital investment - productivity problem

The present situation regarding international regulations does not limit the amount of fishing effort in any international fishery except by way of total catch quotas. In the absence of allocations among countries it does not behoove any entity to limit the amount of fishing effort unilaterally--competition from other units, e.g., companies or other countries would ensure that those that did limit their effort would receive a smaller and smaller fraction of the total catch. In this climate, the number of boats entering profitable fisheries continues to increase creating a situation whereby more and more boats catch the same total amount of fish during a shorter and shorter season. Naturally this creates a problem in which capital is expended without gaining significant increases in productivity.

Current means of regulated catch by the IATTC in the Commission's yellowfin regulatory area (CYRA) encourages new high-speed capacity to take maximum advantage of the increasing short yellowfin seasons. The U.S. capacity in terms of thousands of metric tons of vessel capacity has increased from 41,000 to 85,000 from 1969 to 1972, a 110% increase. Since the current U.S. yellowfin catch is not expected to exceed 160,000 tons and takes less than 3 months to reach, the average vessel makes less than two trips for yellowfin into the convention area. It is anticipated that the U.S. fleet will increase significantly in the next several years.

The problem of the industry is to maintain the existing capital and use future capital expenditures more efficiently by increasing the supply or by changing the situation that mandates increases in effort or both.

1.3 The problems of increasing supply from the Pacific Ocean

The problems facing the U. S. tuna industry in increasing its supply of skipjack from the central and western Pacific fall into three main categories:

1. Technological problems of gear design, fishing strategies, and location of commercial concentrations.
2. Foreign competition, gaining exclusive long-term advantages in the Pacific.
3. Political and institutional barriers.

1.3.1 Technological problems

The expansion of the U. S. tuna industry into the Pacific tuna fishery will depend on the solution of five main technological problems:

1. The design of a purse seine net and development of fishing strategies and tactics that will be successful in the western and central Pacific waters.
2. The obtaining of a bait supply to support an expanded baitfish operation.
3. The development of a unique or hybrid system that would use, for example, bait and purse seines.
4. General information on the location of commercial concentrations of skipjack tuna.
5. A cost-profit profile of a fishery venture in the central and western Pacific Ocean.

1.3.2 Foreign competition

The Japanese especially are moving to increase their supply of skipjack from the western Pacific. Although the Japanese landings of skipjack in recent years have exceeded 200,000 metric tons, maximum utilization of tuna resources near the home islands and increased demand have indicated that Japan will continue to expand its skipjack fleet in the central and western Pacific Ocean. A recent paper by A. Suda (1972) of the Japan Fishing Agency concludes that the Japanese future skipjack fishery. . . "must be considered in terms of greatly expanded fishing grounds." It is anticipated that Korea and Taiwan will also be attempting to exploit the underdeveloped surface tuna resources of this area.

Japanese fishing companies are expanding into this area by establishing joint ventures with various island governments which in some cases give control of the fishing to the government after a period of 5 years. Presumably the Japanese have long-term agreements (at option ?) to continue to receive the fish after the 5-year period. Another recent development is the legislation passed by the Congress of Micronesia which allows foreign vessels to purchase supplies and bait. At this date they are no longer prevented by law from establishing arrangements to obtain supplies and provision in the Trust Territory. The enactment of this law facilitates the expansion of foreign fishing fleet in Trust Territory waters. Nevertheless the U. S. has a most-favored nation status with the Trust Territory and therefore presumably still has a distinct advantage over foreign competitors in building local fisheries or fishery facilities. The Japanese are now taking about 50,000 metric tons of mostly skipjack in the Trust Territory area with bait boats. In addition, the Japanese have two purse seiners fishing off New Guinea with some success for yellowfin during October and November.

1.3.3 Political and institutional problems

Any future U. S. tuna fishery expansion in the Pacific will have to contend with the political and institutional considerations of PIDC, State of Hawaii, factions of the tuna industry, the U. S. Departments of Commerce, Interior and State, as well as foreign entities. For instance, it is generally thought that the Trust Territory would prefer to see a fishery development that gave maximum use of the islands' manpower and shoreside facilities while others may prefer a situation that depended least on the future political status of the islands.

1.3.4 The industry

Some of the institutional problems facing the U. S. industry concern the industry itself. Even though there is a major problem of supply facing the U. S. tuna industry, it is difficult for individual entities to try to find solutions unilaterally, such as, for example, exploration in new areas. On the other hand, considerations of business secrets, and individual companies' spheres of influence,

make it difficult to achieve a common sense of direction and complete cooperation in solving these problems. Nevertheless, individual components of the industry have shown essential agreement on several points regarding the need for tuna fishery development. These are:

The need to solve the bait supply problem in terms that will show the feasibility, cost and expected returns on the many alternative methods for getting naturally occurring or substitute bait.

The development and demonstration of purse seine, bait or combination purse seine-baitfishing methods that are successful in the areas of clear water and deep thermoclines.

An evaluation of the fishing activities of foreign interests and the extent of their competitive edge in the western Pacific and Indian Ocean.

A synopsis of data in combination with new work to delineate the times and places of skipjack and other tuna concentrations and migrations.

The development of alternative plans of funding exploratory and gear work.

Further, on the plus side, there are institutional features which favor the tuna industry. Tuna are still under tariff regulation and the balance of payments problem favors the maintenance of a U.S. fleet to catch tuna rather than relying completely on imports. Also, the greater the proportion of the U.S.-caught tuna that is processed, the less dependency there will be on foreign sources for raw material. This is likely to afford some protection from unilateral sections of foreign corporations and governments in controlling price or supply. Therefore, with a larger portion of the U.S. demand supplied by domestic fishermen there is less likelihood of fluctuation in the price of the finished product with U.S. labels. This has important considerations in protecting the U.S. share of the world market.

1.3.5 PIDC

The PIDC, made up of the Governors of Hawaii, American Samoa, Guam, and the High Commissioner of the Trust Territory, was formed in 1970 to coordinate among other programs a Pacific-wide plan to increase the yield from the sea. As a result, in 1972 the Congress of the United States passed Public Law 92-444, authorizing the Department of Commerce to initiate a program to develop the tuna and latent fishery resources of the central, western and South Pacific Ocean. Congress authorized the \$3,000,000 program for a 3-year period; however, no subsequent appropriations have been authorized.

The island regions and elements of the tuna industry have common interests in fishery development, but they also have some quite different objectives. Each would agree that there is a need to establish historical fishing rights in the vast area of the central and western Pacific in order to assure access to the tuna and other high seas fishery resources and a voice in their management. Beyond that, however, the island interests look to the harvest of the resources to contribute to the employment of their people and their overall economic development and the U. S. industry looks to the region for an additional supply of raw material.

As far as the U. S. tuna industry is concerned, the processors are interested in obtaining the additional raw tuna to supply their mainland canneries, plants that they have elsewhere including the two at Pago, Pago, American Samoa, and Honolulu, and others that they may establish in the PIDC area if it proves advantageous to do so. Whereas U. S. processors wish to maintain a viable U. S. tuna fleet (because they otherwise would be entirely dependent on foreign suppliers) they also are interested in expanding their supply sources from wherever else possible including foreign vessels in which they have financial interest or joint ventures which these can arrange. U. S. tuna boat owners, on the other hand, are interested in expanding their area of fishing in order to guarantee year around operation of their vessels. U. S. vessel owners are amenable to the training and employment of crew members from regions other than the U. S. when it is feasible and not contrary to U. S. law. Should U. S. vessels operate from ports of the Trust Territory training and employment of fishermen in that area would be a natural consequence.

Both elements, processors and boat owners, are interested in access to bases in the central and western Pacific for transshipment, cold storage, fuel and supplies, live bait, and other needs. Certain of these requirements can be obtained automatically in Hawaii, American Samoa and Guam. The potential for obtaining some or all of these needs in the Trust Territory exists if mutually beneficial and acceptable arrangements can be worked out between the U. S. fishery operators and the authorities in various Districts. Since the Trust Territory is not a part of the U. S. or a U. S. territory, arrangements which are necessary for U. S. fishing activities will necessarily be those which might be made with a foreign country, although it must be emphasized that the U. S. at least at the present time holds a strongly favored status. These arrangements will probably require official negotiations.

The overall plan calls for an expansion of the U. S. tuna industry's activities in the central and western Pacific, especially the harvesting segment. If it is successful it will benefit the island areas of PIDC. Just how the benefits may be distributed and what their magnitude might be will depend on many things. They will depend on which fishing methods prove to be feasible, the geographic regions in which adequate catches can be made, where transshipment or processing facilities are available or can be established, where and under what conditions fishing bases can be established and the ability to compete with fishermen of other countries, especially Japan, for the available harvest.

It is not possible to predict which methods of fishing may be successful or which island areas may ultimately benefit. However, some overall assessment of the future can be made. The successful operation of super seiners would be of immediate benefit to Guam, American Samoa, Palau (T. T.) and Hawaii. Guam, which does not now participate in any aspect of the tuna industry, would, because of its location, become an important transshipment point and supply center for the seine fleet. American Samoa with two canneries operating in Pago Pago would benefit from an increased amount of fish for processing. It would also be used as a supply center. The District of Palau with its cold storage facilities would expand its transshipment activities. The existing tuna cannery in Hawaii would receive additional catches for processing or Honolulu would participate in the handling of transshipments.

As far as the bait boat operation is concerned, the most likely area to benefit immediately would appear to be the Trust Territory because of its strategically located islands which blanket a vast area off the western Pacific. Shore bases would be needed for the small vessels which would engage in this type of fishing. Also, they would require access to supplies of live bait, whether natural, artificially reared, or transported from other regions. Evaluation of the feasibility of bait boat fishing, however, is dependent on the cooperation of officials of the Trust Territory, especially those in the Districts and the local communities. They will have to be persuaded that successful exploratory operations are a prerequisite to long-term joint ventures.

Whereas the interest of the U.S. fishing industry may be the development of tuna fisheries in the western Pacific, there is reason to believe that the harvest of the inshore fishery resources could receive favorable attention during the course of developing or expanding a tuna fishery. Both the U.S. fishing industry and NMFS probably could assist jointly in the effort if the High Commissioner's staff and authorities in the Districts considered that it would be beneficial. Success of tuna fishery development activities in the Trust Territory depends on joint planning and a close and continuing working relationship with local people in the several Districts.

Possibly the most difficult problem to overcome from the U.S. point of view will be the conviction on the part of the people of the Trust Territory that the tuna and live bait resources in the waters in their immediate vicinity are far more abundant and available than they really are. There will also be the difficult problem of obtaining the participation of the local population in actual fishing operations.

In summary, the U.S. industry is generally free to undertake whatever development activity it considers advantageous in Hawaii, Guam and American Samoa and whatever proves to be successful will result in some economic benefit to these areas. The situation, however, in the Trust Territory is different in that permission is necessary and certain legal requirements must be met if the U.S. industry is to participate in the development of tuna fisheries of that area. Furthermore, the peoples of the Trust Territory will have to be persuaded and the U.S. industry will have to demonstrate that U.S. activities are of long-term benefit to them.

Finally, those responsible for planning and arranging U. S. tuna fishing activities in the Trust Territory will need to keep abreast of the "Status Discussions" which are underway and which will dictate the entity that the Trust Territory will take in the immediate future. The route which the Territory takes will affect what role the U. S. Government and the U. S. industry can or might take in developing the tuna fisheries of the area.