

The Tuna Industry in the Pacific Islands Region: Opportunities for Foreign Investment

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Introduction

The international tuna industry is in a state of flux. Since the early 1980's (and particularly since 1983), many planned and forced adjustments have occurred. The causes included: 1) Industry rationalization programs in Japan (i.e., government-initiated measures to reduce and limit fishing effort to improve economic conditions in the tuna fishing industry), 2) declaration and formalization of 200-mile Exclusive Economic Zones (EEZ's), 3) significant advances in regional fisheries cooperation in the Pacific islands region under the auspices of the Forum Fisheries Agency (FFA), 4) increased fuel prices, 5) depressed tuna prices, and 6) high rates of interest and expanded Asian canning capacities where per unit production costs (in both monetary and real terms) are markedly lower than in the traditional processing areas of the United States and Europe¹.

During the same period, activity and

interest in the tuna fishery in the Pacific islands region has heightened. More Asian (Korean, Taiwanese, and Filipino) and American vessels, particularly purse seiners, have joined Japanese tuna fleets in the region. While pole-and-line and longline fishing there has stagnated or declined, purse-seining (total number of vessels) reached an all-time high in 1984.

Pacific islands nations have also sought greater involvement in their tuna fisheries and fairer financial returns for the fish harvested by distant-water fleets in their EEZ's. Some island governments have also promoted foreign investment to establish new tuna industries or bolster and expand existing ones.

Thus, some western industry leaders² believe that the time is right for these governments to make concerted efforts to attract and facilitate investment in the tuna industry. This opinion is based primarily on financial considerations related to past modes of operation (both in terms of fishing and the location of processing facilities

throughout the world), resource availability, and the fact that the world tuna industry appears to be at a crossroads.

This paper reviews the tuna industry in the Pacific islands region, beginning with the region's fishery in terms of distant-water fishing fleet operations and national industries. While the former involves only fishing, the latter concerns both fishing operations and tuna processing. Governmental objectives in fostering tuna projects and industry development in Pacific island countries are analyzed together with the conditions required to attract foreign investment. The paper concludes by describing current opportunities for investment in the tuna industry in the Pacific islands region.

The Fishery

The tuna fishery in the Pacific islands region is an integral and important component of the world tuna fishery. The Pacific islands region is defined as that region encompassing the geographical areas of Micronesia, Melanesia, and Polynesia, stretching from Palau in the west to Easter Island in the east (Fig. 1). It is estimated that in 1984 some 650,000 metric tons (t) of tuna (all species) were harvested in the region by distant-water fishing fleets and by vessels registered and based within the

¹Conventional tuna processing is a labor-intensive activity and for this reason wage costs are an important component of canned tuna production costs. In 1984 wage rates were US\$7-8/hour in California, US\$3/hour in American Samoa and Puerto Rico, and U.S.\$0.37/hour in Thailand (Anonymous, 1985).

²Personal communication with industry consultants and managers in the United States and Europe.

ABSTRACT—This paper reviews the tuna industry and fishery in the Pacific islands region, in terms of distant-water fishing fleet operations and national industries. The former involves only fishing and the latter concerns both tuna fishing (in 12 countries and territories) and processing (in 6 coun-

tries and territories). Government objectives in fostering the establishment of tuna projects and industry development in the region are analyzed together with conditions needed to attract foreign investment. Current opportunities for industry investments are also described.

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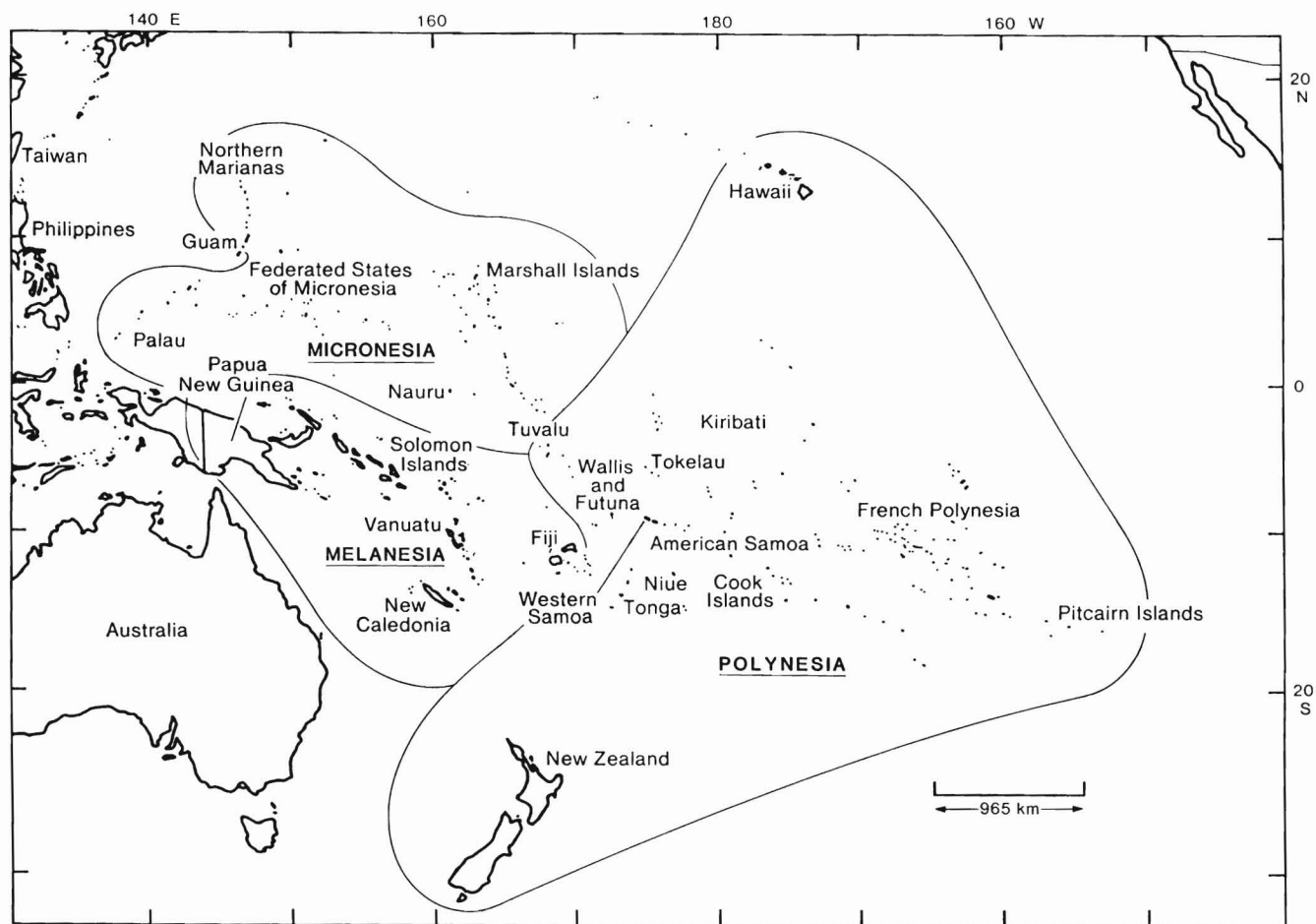


Figure 1.—The Pacific region showing the geographical areas of Micronesia, Melanesia, and Polynesia.

region³. These landings accounted for about 35 percent of the total world tuna catch.

Distant-Water Fishing Operations

Distant-water fishing vessels operating in the Pacific islands region use three fishing techniques: Longlining, pole-and-lining, and purse seining. The latter two methods target on surface

³Clark, L. G., 1985. Trends and implications of extended coastal state sovereign rights for the management and development of fisheries—west central and southwest Pacific. Inst. Mar. Stud., Univ. Wash., Mimeogr. rep., 12 p.

stocks of tunas, particularly skipjack tuna, *Katsuwonus pelamis*, and juvenile yellowfin tuna, *Thunnus albacares*, while the former method exploits deeper dwelling tunas, particularly adult yellowfin tuna, albacore, *Thunnus alalunga*; and big-eye tuna, *Thunnus obesus*, in the Pacific islands. Billfishes (*Xiphias gladius*, *Makaira nigricans*, *Istiophorus orientalis*, and *M. marlina*) are also susceptible to longlining, as are sharks (*Isurus oxyrinchus*, *Carcharhinus falciformis*, *C. longimanus*, and *prionace glauca*).

In 1984 about 115 purse seiners operated in the Pacific islands' tuna fishery,

about 90 percent of which were either American Tunaboat Association (ATA)⁴ or Japanese vessels. The rest were Honduran, Filipino, Korean, Mexican, or Taiwanese. In addition, some 700 long-line vessels operated in the region. These vessels were, for the most part, Japanese and Korean, although Taiwanese longliners also fished.

Distant-water pole-and-line fishing has declined in recent years in the Pacific islands region, largely because

⁴Mention of trade names, private organizations, or commercial firms or products does not imply endorsement by the National Marine Fisheries Service, NOAA.

of the rationalization plans of the Japanese government for this component of the industry (Doulman and Wright, 1983). In 1984, about 100 pole-and-line vessels licensed to operate in the Pacific islands region operated mainly in Micronesian waters, including the extensive Kiribati EEZ.

Of the 650,000 t of tuna landed in the Pacific islands region in 1984, an estimated 500,000 t were landed by distant-water fishing fleets. At 1984 prices (which were depressed and below long-term average trend prices), the market value of this catch was about US\$420 million.

Most distant-water fishing vessels operate in the Pacific islands region under various "access agreements" which acknowledge the jurisdiction of the island governments over tuna stocks within their 200-mile EEZ's and the right of these governments to regulate and control access to those tuna resources. In turn, the agreements permit foreign-licensed vessels to operate for a negotiated fee on specified terms and conditions of access which govern such matters as crew and vessel obligations within the EEZ's of licensing states and the furnishing of catch statistics for each fishing trip. Pacific island countries must impose these terms and conditions to ensure the orderly exploitation of their tuna resources. Provision of catch data in particular is a basic requirement for sound biological management of the fishery and, in turn, for conservation of tuna resources.

The access agreements are either bilateral or multilateral. Agreements in some form (including those in the process of renegotiation) are currently in force between various Pacific island nations and Japan, Korea, Mexico, Taiwan, the United States, and the Soviet Union. All agreements are negotiated with Pacific island governments (or their statutory agencies such as the Micronesian Maritime Authority in the case of the Federated States of Micronesia), although signatories to agreements for distant-water fishing nations represent both government and industry.

Access agreements in all cases yield a financial return for Pacific island governments which is combined, in

some instances, with an aid component. The financial yield can be determined several ways, although there is a movement by governments in the region to relate returns to the quantity and market value of tuna harvested. Most Pacific island governments attempt to secure a financial return equal to at least 5 percent of the market value of the fish harvested. In some agreements this objective is explicitly acknowledged; in others its recognition is implicit.

Aid provided as part of access agreements frequently consists of the provision of capital equipment (vessels, fishing gear, industrial freezers, etc.), access to training programs, and, in some cases, grants or concessional finance for fisheries projects usually of a developmental rather than a commercial nature. However, it is policy for some Pacific island governments to reject aid as part of access agreements on the grounds that these agreements should be negotiated strictly on commercial terms. These countries maintain that if a distant-water fishing nation wants to grant aid to fisheries, it should not be linked to any consideration of access for the donor's fishing fleet.

Under present conditions, agreements between the island nations and distant-water fishing nations generate few indirect benefits. This is because distant-water vessels operate from and return to their home ports where they purchase all provisions before the start of each fishing trip and usually land their catch upon their return. Consequently, there is little interaction between the distant-water fishing fleets and the domestic economies of the island countries. Few nationals from the region are employed (except for a few Micronesian fish handlers and laborers in Guam and Tinian [Commonwealth of the Northern Marianas Islands] and some Samoans) in the fishing operations. As a general rule, distant-water fishing vessels utilize ports within the Pacific islands region only in cases of emergency, i.e., a medical need or vessel mechanical problems. Some purse seiners do transship their catches at the ports of Guam and Tinian while others unload directly at the canneries in American Samoa, but only there do distant-water fishing

fleets generate indirect benefits within the region.

Indirect benefits generated by fishing fleets based at ports in the region can be substantial. For example, in 1981 in Papua New Guinea the domestic operators of small (50 Gross Registered Tons (GRT)) pole-and-line vessels in the domestic fleet spent US\$240,000 per vessel on goods and services supplied by local merchants and workers. Similarly, expenditures by the operators of a medium-sized (350 GRT) purse seiner based at Rabaul in Papua New Guinea totaled US\$400,000 in 1981 (Doulman, 1984). Twelve visits by American purse seiners to Honolulu in 1983 generated more than US\$2 million in income for Hawaiian businesses (State of Hawaii⁵). These expenditures represent significant payments to local businesses, and although there is a high import component in many of the goods and services provided (i.e., fuel purchases), their supply boosts the level of economic activity in the locations where the fleets are based and serviced. Therefore, the region's governments with the capacity to service distant-water fleets such as Hawaii, the Federated States of Micronesia, Fiji, Guam, and Papua New Guinea have expressed interest in basing vessels on a semi-permanent or permanent basis in their respective countries.

Tuna landed in the Pacific islands region by distant-water pole-and-line and purse-seine vessels are primarily destined for canning, while the long-line product usually goes to Japan's sashimi (raw fish) market. A large proportion of the tuna landed by purse-seine and pole-and-line vessels is processed by canners in Asia (Thailand, Japan, and the Philippines), and the United States (American Samoa and Puerto Rico)⁶.

National Industries Within the Pacific Islands Region

Of the 650,000 t of tuna taken in the Pacific islands region in 1984, about

⁵State of Hawaii Department of Planning and Economic Development. 1985. Hawaii as a base for tuna purse-seining operations. Hawaii Dep. Planning Econ. Dev., Mimeogr. rep., 36 p.

⁶At the beginning of 1985 the United States had only one relatively small tuna cannery (Pan Pacific) operating on the mainland at Terminal Island, Calif.

150,000 t (about 23 percent) were harvested by vessels permanently based at ports within the region, and about 60 percent of that was processed in the region. The unprocessed market value of the catch taken by the region's vessels was estimated to be US\$83 million.

Pole-and-line and long-line fleets (or individual vessels) are currently based in American Samoa, Fiji, Hawaii, Kiribati, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Nauru has two purse-seine vessels, and since 1980 one seiner of Honduran registration has been based in Papua New Guinea. Tuna landed by the fleets based in Kiribati, Papua New Guinea, and Vanuatu is exported. Pole-and-line caught tuna from Kiribati and Papua New Guinea is being processed in Fiji and elsewhere (e.g., Thailand) while some long-line product goes to Japan⁷. Tuna landed by vessels in American Samoa, Fiji (including the vessels from Tonga and Tuvalu), Hawaii, and Solomon Islands are processed at facilities in those countries, although a large proportion of the tuna landed in Solomon Islands is exported in frozen round form to canneries in the United States and Asia. With the closure of the only tuna cannery in Hawaii (Hawaii Tuna Packers) in late 1984, the prospects for the Hawaiian fleet that relied on sales of fish to the cannery are unclear.

The ownership of tuna fleets based in the Pacific island region varies. Some fleets are owned by governments or statutory bodies, joint-venture companies, private corporations, or individual fishermen who have charter agreements with processors. It is quite common for ownership patterns to change or for more than one type of ownership regime to exist in a single country. For example, vessels in Solomon Islands are independently owned by both a joint-venture company and a statutory corporation. To ensure tuna supplies for Pacific island process-

⁷According to industry reports, tuna landed by Kiribati's fleet is now sold under contract to the Star-Kist cannery in American Samoa and not to the cannery in Fiji.

ing facilities, contractual arrangements between processors and vessel owners are usually made if the vessels are not owned by the processing company.

Shore-based tuna facilities are for transshipment and processing (i.e., canning and smoking of katsuobushi or arabushi). Vanuatu's transshipment facility was built in 1957 and is owned and operated by Mitsui Bussan to accumulate catches of individual vessels for economical export. The facility can handle up to 10,000 t of long-line caught tuna per year, although in recent years smaller quantities have been handled (i.e., <4,000 t was transshipped in 1984). At US\$7 million, Vanuatu's 1984 tuna exports accounted for about 12 percent of the country's total exports (Government of Vanuatu, 1985).

A transshipment facility established in Palau in the early 1960's was formerly operated by Van Camp (Ralston Purina), with tuna being shipped to the Van Camp cannery in American Samoa for processing. Since 1982 the facility has not been utilized commercially.

Transshipment operations in Guam, which started modestly in the early 1970's, involve purse-seine vessels. These operations do not utilize design-specific shore-based facilities and as such are inherently temporary. In Tinian, transshipment operations consist simply of transferring tuna from one vessel to another in a sheltered harbor. No shore-based infrastructure exists to support these operations. Thus, the ports of Guam and Tinian are not currently considered to be transshipment ports in the strict sense of the term.

Tuna processing facilities are located in three countries and one territory in the region. The largest are in American Samoa where two canneries (combined annual processing capacity >140,000 t) have been upgraded and expanded. They are owned by Star-Kist (H. J. Heinz) and Van Camp (Ralston Purina). The former began operations in American Samoa in 1963 and the latter in 1954.

The economy of American Samoa is overwhelmingly dependent on these two canneries. More than 90 percent of American Samoa's total export value is derived from them and they account for

about 30 percent of total wage employment in the territory. The canned tuna is marketed principally in the United States.

Smaller tuna canneries are located in Hawaii, Fiji, and Solomon Islands. The Hawaiian cannery, now closed, was owned by the American corporation Castle and Cooke. Its future is uncertain. In recent years the Hawaiian cannery processed about 16,000 t of tuna yearly. Canned production was valued at US\$40 million and was marketed locally and on the U.S. mainland. The cannery was also an important employer, providing about 400 jobs⁸.

Almost all the tuna landed in Fiji's EEZ is canned for export to Europe, mainly, and more recently to the United States. The small part of the high valued long-line caught product is exported raw to Japan for the sashimi market. In 1983, 8,500 t of tuna was processed in Fiji with export receipts of about US\$11.8 million—slightly less than 3 percent of Fiji's overall exports in 1983 (Government of Fiji, 1984).

Fiji's tuna cannery, built in 1964, is a joint venture between the Fijian Government and the Japanese firm C. Itoh, with Itoh holding 71 percent of the equity and providing marketing and management. However, Itoh has informed the Fiji Government that it will quit the joint venture upon expiration of the project agreement in 1987, reportedly owing to lack of profit (Islands Business, 1985). However, Itoh was also a minority partner in Papua New Guinea's largest and most successful prawn company, New Guinea Marine Products Pty., Ltd., in Port Moresby. In 1983 Itoh sold its equity in the company on the grounds that it wanted to quit fishing as a matter of company policy and to concentrate solely on trading, the company's principal business activity. It is a matter of conjecture, therefore, that Itoh's desire to withdraw from its Fiji operations might

⁸Hawaii Department of Planning and Economic Development officials. Personal commun. 1985. A recent (May 1985) development involves the possible cannery purchase by a local company. If this occurs, its operations may be scaled down and to process only tuna landed by Hawaiian-based vessels.

not be related to the Fiji operations per se but rather to its stated policy of wanting to return to its primary corporate trading objective. With the likely withdrawal of Itoh from the joint venture, the government of Fiji is actively seeking a foreign partner as a replacement (Islands Business, 1985).

Solomon Islands produces both canned tuna and arabushi, and the operations, which began in 1972, are a joint venture between the Solomon Islands Government and the Japanese firm Taiyo, which provides the fishing, management, and marketing expertise. Apart from American Samoa, where the tuna industry dominates the territory's economy, no other tuna operation in the region is as economically important as the tuna industry in Solomon Islands. In 1983, tuna vessels based in the country landed some 39,000 t (all species), of which 4,900 t were processed as canned (3,100 t) or smoked (1,800 t); the remainder (34,100 t) was exported in the round, frozen. The 1983 export value was US\$24 million, representing 41 percent of the country's total exports for the year.

Arabushi from Solomon Islands is marketed in Japan by Taiyo, while the canned tuna is usually sold in Europe (it, like the Fijian product, enjoys a high reputation and is often sold under up-scale labels such as "John West").

The establishment of tuna processing facilities in the region has allowed countries to conserve foreign exchange reserves to some extent through import replacement of canned fish.

Development Prospects

All Pacific island Governments have clearly stated that they want increased involvement in their tuna industry. Some, such as Papua New Guinea, have recently taken an aggressive approach to attracting potential foreign investors and have identified tuna development as a priority area for investment (Government of Papua New Guinea, No date). Similarly, Fiji has sought closer fisheries cooperation with the United States, particularly in establishing transshipment facilities for American purse seiners and the possible replacement of

C. Itoh with an American partner (Islands Business, 1985).

All governments in the region have a generally healthy and realistic attitude about the need for foreign capital and expertise in the tuna industry. Furthermore, the governments are prepared to invest in the industry if necessary to attract foreign participation.

Government Objectives

In seeking foreign partners to help develop their tuna fisheries, Pacific island governments have several specific goals:

- 1) Creating employment opportunities for Pacific islanders. Most island nation citizens have limited employment opportunities and, with annual population growth rates ≥ 2 percent, job creation is a top priority (South Pacific Commission, 1984). Creating employment opportunities helps cushion the adverse impact of rapid population growth and urbanization.

- 2) Generating foreign exchange. All Pacific island countries seek to improve their balance of trade via the tuna industry. This can be done partly through import replacement policies (and possibly by saving foreign exchange on tinned and frozen fish imports) and partly through selling processed and frozen round tuna.

- 3) Broadening and strengthening the country's economic base. Pacific island countries generally have narrow economic bases and are dependent on a small range of export commodities that often face unstable world markets. While tuna markets exhibit this characteristic, as an additional export commodity it permits diversification, strengthens the economic position of the country, and can have a stabilizing influence on a country's export earnings and government income.

- 4) Gaining greater national control over the exploitation and utilization of the country's tuna resources.

- 5) Generating additional government revenue to support socioeconomic development programs.

- 6) Training of Pacific islanders in a continuing effort to reduce dependence

on foreign skills in the tuna and related industries.

- 7) Facilitating technology transfer to Pacific island countries.

These considerations apply to most industrial projects being established in Pacific island countries. However, the ranking given to the various development goals depends on socioeconomic priorities in each country.

Considerations for Foreign Investors

While each island government has specific benefits that it seeks to achieve, foreign investors are essentially concerned with the risks involved in the venture and the financial security of their investment. Potential investors in the Pacific island tuna industry will carefully scrutinize the proposed project and location prior to committing funds, and will assess the following aspects:

- 1) Resource availability. Tuna resources of proven commercial potential must exist in the proposed location. If pole-and-line fishing is involved, bait-fish stocks may be examined. Seasonality of both resources should be determined, along with discernible tuna migration patterns.

- 2) Investment climate. Several factors affect a country's investment climate: Political stability, management of the economy (including monetary and fiscal policy), type and extent of controls placed on foreign investors and the consistency with which these controls are applied, clarity of investment guidelines, and the responsiveness of government agencies and departments in dealing with foreign investment queries and proposals.

- 3) Availability of necessary natural facilities (water, harbors, etc.). A lack of natural endowments, i.e., fresh water supplies in some island nations can hamper shore-based tuna development.

- 4) Infrastructure available, and a positive government position on its use (i.e., rent, sharing, etc.) and the provision of new infrastructure. (The fate of a proposed project may depend heavily on the latter.) Including infrastructure

in a project's cost might make it too costly to proceed. However, initial financing of the infrastructure by the government and levying a user-charge on the investor greatly reduces the financial impact on the project in its early years.

5) Local availability of essential goods and support services (i.e., fuel supplies, storage facilities, telecommunications, basic engineering services, etc.). Also included are entertainment facilities for rest and recreation of fishing crews and shore-based workers.

6) Availability of labor and skill-level of the workers. Prevailing wage rates, productivity, and industrial relations are important to prospective investors in shore-based facilities.

7) Fiscal and other incentives and concessions offered by the host government.

The relative importance of each of these considerations will vary among investors who may represent an individual or a multinational corporation. Direct government participation in a project also reduces a foreign investor's exposure to risk and (for these and other reasons) government participation is often considered desirable.

Investment Opportunities

Many investment opportunities in the Pacific islands tuna industry currently exist. They can best be reviewed in terms of the three major industry activities: Fishing, transshipment facilities, and processing facilities and marketing.

Fishing

Most, if not all, of the region's governments would welcome proposals from foreign investors to expand their domestic tuna fishing capacities. Such proposals should provide for stable commitments on the part of the investor and have well-defined benefits for the nation involved. Inclusion of benefits is necessary to dispel the sometimes justifiable suspicions of some governments about possible underlying motives of the foreign investor (e.g.,

development of a national industry versus obtaining supplies of fish for processing elsewhere).

Regional interest in tuna fishing expansion centers principally around investment in purse seiners, although opportunities also exist in the long-line fishery and to a lesser extent in pole-and-line fishing. At least four countries—Fiji, Kiribati, Papua New Guinea, and Solomon Islands—are considering adding purse-seine vessels to their national fleets, and Western Samoa may be considering the same⁹. Micronesia, has expressed interest in expanding both domestic pole-and-line and long-line activities.

Foreign entrepreneurs who want to base their purse-seine vessels permanently at a port in the region would, in most instances, receive favorable consideration from island governments. Each country where a vessel is based would derive financial and other indirect benefits while the vessel owner would likely receive preferential access to the country's tuna resources. For example, it is possible that countries may impose a ceiling on the total number of licenses to be issued and that ranking criteria will be established as a means of allocating licenses. Vessels based in the licensing country will be given top priority followed by vessels from other countries in the region with which the licensing country has special arrangements.

Transshipment Facilities

The region's only shore-based transshipment facilities with the capacity to service the industrial tuna fishery are in Palau and Vanuatu. Additional facilities close to the purse-seine fleet fishing grounds would enhance fleet efficiency and boost financial returns by minimizing unproductive port time and travel time. The primary impediment to establishing shore-based facilities is the lack of facilities enabling prompt and efficient service at ports of discharge (i.e., prompt unloading of the catch and loading provisions).

Port congestion and other restrictions

⁹Source: Various press and industry reports.

(i.e., Pago Pago, American Samoa) often mean that seiners are idle for as many as 10-60 days when discharging their catch. The round trip between Pago and Pago and the purse-seining grounds in the Federated States of Micronesia and Papua New Guinea can take another 15-20 days. Similar travel time is common for Japan-based vessels.

Pacific island nations have expressed considerable interest in establishing transshipment facilities. The most promising locations (and active support for such facilities) are in the Federated States of Micronesia, Papua New Guinea, and Guam (if the U.S. government can waive certain restrictions that apply to foreign flag carrier vessels in Guam's ports).

Japanese government policy on tuna transshipment has traditionally required all Japanese flag vessels to return to Japan to discharge their catches at the end of each fishing trip. This enables their government to regulate the supply of tuna to the Japanese market and support prices. The policy is particularly important for the long-line fishery and represents a textbook example of a government utilizing institutional arrangements to alleviate the inefficiencies of an over-capitalized industry.

It is, however, a common approach used in mature fisheries by most governments around the world, because attempts to rationalize fisheries in the short to medium terms are often politically sensitive and difficult. Nonetheless, in 1983 Japan relaxed its transshipment policy, allowing its seiners to transship tuna at Guam, Tinian, and other Asian ports. This change seems partly related to the end use of tuna landed by purse seiners vis-a-vis that of long-liners.

Much of the purse-seine product is exported from Japan to U.S. canneries (and more recently to Thailand and Philippine canneries), while long-lined fish are primarily consumed in Japan. Thus, the Japanese Government probably has a stronger proprietary interest in maintaining higher and more stable prices for long-lined fish products by regulating their supply than it does for

purse-seined products. The significantly different operational characteristics and cost structures of the two fisheries might also have a bearing on the changes in Japanese policy.

Tuna transshipment facilities are either being considered, or constructed in several island countries. In Majuro, Marshall Islands, a US\$2 million wharf and cold storage facility is being built, and is financed by the Japanese Government under its fisheries aid program. It will service some 400 tuna vessels mainly of Japanese flag, fishing Marshall Islands' waters and will later be expanded, making Majuro a prominent regional tuna transshipment base (South Pacific Commission, 1985b).

The Federated States of Micronesia has been considering the establishment of a cold storage and transshipment facility at Dublon Island (Truk State) which already has an excellent wharf for large ocean-going vessels. Dublon Island is also optimally situated to service purse-seine fleets, and about US\$450,000 has been slated for facility and port planning and construction in 1986. US\$250,000 will be spent in fiscal year 1987 to refurbish the former Van Camp transshipment and freezer facility in Palau (Pacific Fisheries Development Foundation¹⁰).

In Papua New Guinea, a medium sized transshipment facility (3,000 t capacity) is being considered for either Manus or Rabaul to service purse-seine fleets in the country's EEZ. The Fijian Government and Chamber of Commerce are also interested in attracting American purse seiners to their ports (South Pacific Commission, 1985b), and if successful, transshipment facilities will probably be needed there.

Processing Facilities and Marketing

Pacific island nations also recognize the benefits of vertically integrated industries and the need for reasonable economies of scale to ensure financial viability. The former would protect financial returns to investors and gov-

¹⁰Pacific Fisheries Development Foundation. 1985. Quarterly Report January-March 1985. Mimeogr. rep. 48 p.

ernments by spreading the different levels of risk. The greatest benefits for the countries will be achieved when the company undertaking a project catches (utilizing its own vessels or those that it has contracted), processes, and markets its product in a vertically integrated manner. Loss of control over any of these activities, particularly processing and marketing, will render fewer benefits to the company, its stockholders, and, in turn, the government. Tuna fishing constitutes the high cost/risk end of the industry where financial returns are inherently unstable and sometimes marginal depending on market conditions. Processing and marketing, on the other hand, is the lower risk end of the industry with financial returns characteristically high and less volatile.

The Governments of Fiji, Papua New Guinea, and Solomon Islands are now considering the establishment or expansion of existing tuna processing facilities. Fiji is seeking a partner (and proposals from foreign investors) to replace C. Itoh in its joint venture company after 1987.

Papua New Guinea has selected five potential foreign investors to help develop its tuna industry. The investors (from the United Kingdom, Denmark, France, Thailand, and the Philippines) are making feasibility studies of their proposed projects in Manus and Kavieng.

The US\$7.5 million expansion of the Solomon Islands joint-venture cannery, planned for several years, is expected to double existing processing capacity to 10,000-12,000 t of tuna per year. The cannery will be relocated from Tulagi to Noro in the Western Solomons. The Tulagi site will continue as a receiving and cold-storage support facility (South Pacific Commission, 1985c). The Solomon Islands government will continue as an equity partner with its current Japanese partner, Taiyo.

Other Products

Besides canned tuna, prospective foreign investors might consider tuna loin production. While this is inconsistent with vertical integration, loin processors might be able to negotiate long-term

product sales contracts that would guarantee both minimum (floor) loin prices and quantities irrespective of market conditions¹¹. This could offer the producing company greater financial security. However, lacking well defined and "water-tight" long-term sales contracts with loin purchasers, Pacific island nations should not promote loin production. In a market downturn (which will occur periodically), loin producers may have to scale back operations, resulting in financial losses and income instability.

Loin production is currently fraught with technical problems¹², which if overcome, could benefit processors remaining in high wage countries since they could dispense with the costly preparation of loins and could can the loins and market them competitively. Pacific islands loin producers, on the other hand, would derive employment and other benefits from producing the loins and could process the tuna offcuts, most of which could be sold domestically.

Opportunities for expansion of katsuobushi and arabushi production in the region are limited by marketing knowledge, Japanese demand, and, in some countries lack of firewood for smoking. Thus, investment in such processing plants is not considered important. Nonetheless, Papua New Guinea's 3,000 t capacity katsuobushi plant, mothballed in 1981, is expected to be reopened.

Conclusion

Pacific island nation Governments strongly encourage development of the region's tuna industry. A large and proven resource exists and national conditions are conducive to foreign investment.

Currently, the principal constraint on development is the inability of foreign investors and governments, either individually or in combination, to put together bankable projects. Projects

¹¹A precedent for this exists in Papua New Guinea with the sale of timber to overseas buyers.

¹²The international trade in tuna loins is currently small. If loin preservation problems can be overcome, tuna processing facilities might be moved back to the U.S. mainland.

must be financially and technically viable before foreign investors or governments commit funds. (However, the time-frame requirements for governments in terms of return on investment probably differ from those of private investors.)

In addition to the overriding consideration of viability, regional tuna projects should:

- 1) Be internationally cost and price competitive,
- 2) Produce a high-quality product that is acceptable to international markets,
- 3) Provide fair and reasonable financial returns to equity participants,
- 4) Have committed, innovative, competent, and progressive management and marketing expertise capable of promoting efficient, stable, and enduring industries, and
- 5) Be consistent with socioeconomic development goals of host governments.

Projects that can satisfy these conditions should have little difficulty in securing financing from private and semi-official sources. Many institutions are eager to finance such projects in the Pacific islands region if viability and bankability are demonstrated.

If it is accepted that the role of government is not normally to be actively involved as an equity participant in commercial ventures, governments should encourage foreign investors to initiate and undertake projects without public involvement (at least as an opening

negotiating position). However, the nature of the tuna industry, and indeed the fishing industry in general, will often prompt foreign investors to seek government participation in projects as an indication of the government's commitment to the industry's development. On the other hand, governments will frequently opt for an active role in fishing projects to have better control over trading and pricing practices. In reality, direct government participation may have little effect on these practices. Alternative measures to equity participation, which are more efficient and generally less costly, can be exercised by governments to monitor pricing and trading practices of foreign entrepreneurs involved in resource exploitation.

Given that there is common ground between foreign investors and governments (although for different reasons) to be actively involved in tuna projects, joint-venture arrangements probably represent the most accommodating solution for all parties. Projects that involve consortia of foreign investors, as opposed to individual investors or companies, enjoy additional advantages. These advantages include reduced risk levels for each party, greater expertise for the project, and a series of checks and balances on the activities of individual investors.

Pacific island Governments are keenly aware that the region's tuna resources are a sufficient but not necessary condition to ensure the existence of a tuna industry. Thus, the Governments are realistic in their goals and they are aware

of what is achievable and needed to attract quality foreign investment.

Finally, many industry observers contend that the Pacific islands region will continue to play an important and increasing role in the international tuna industry. Prudent tuna processors concerned with long-term security of fish supplies and others who want a stake in the region's industry might be well advised to avail themselves of existing opportunities there.

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