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Fiji

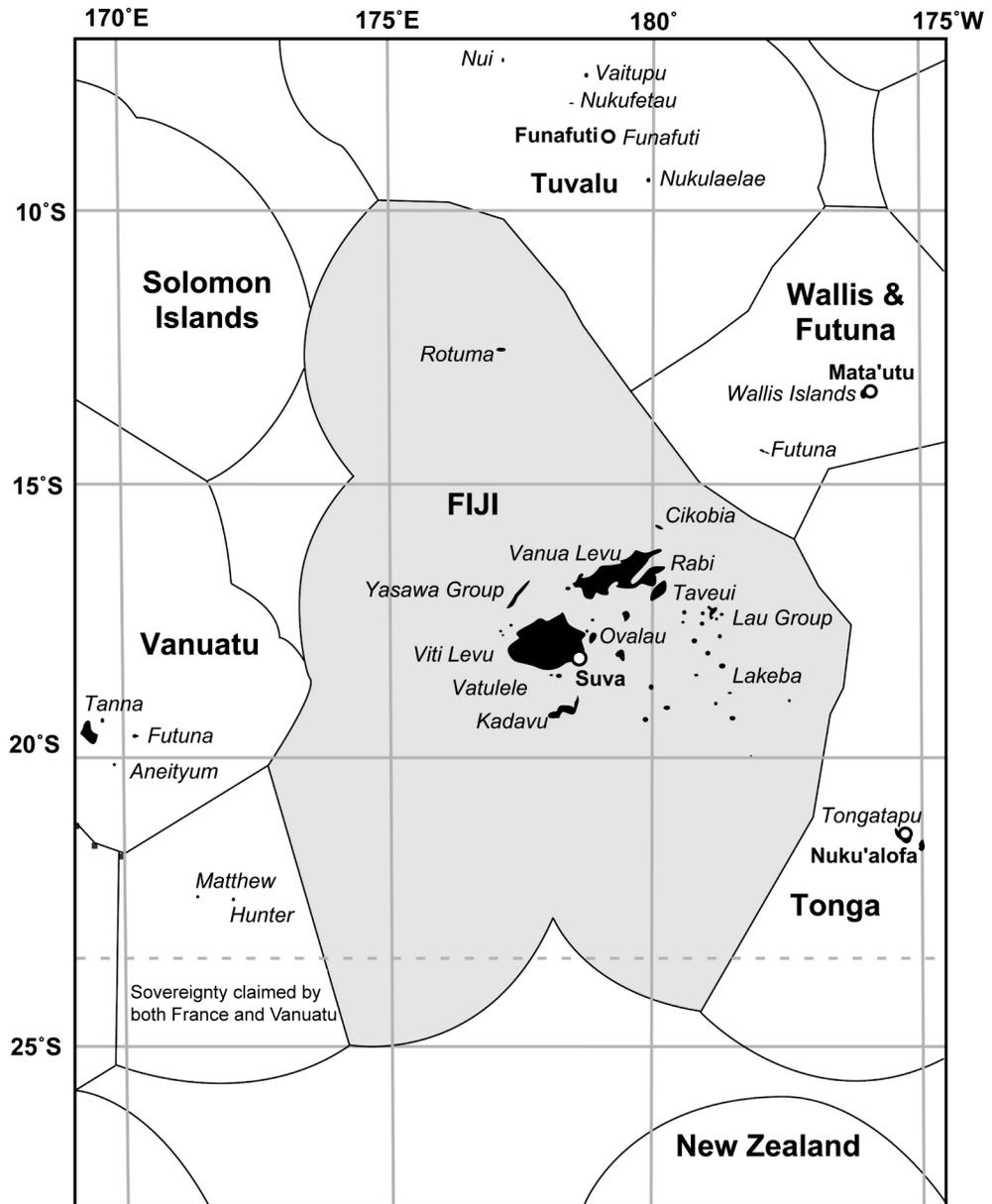
Population: 847,000
Land area: 18,247 km²
Sea area: 1,260,000 km²

Fiji is made up of about 800 islands and islets, of which about 110 are inhabited. Fiji was a British colony between 1874 (with the island of Rotuma added in 1881) and 1970. Suva was the centre for British colonialism in the Pacific region, a status that set Fiji up to be the ‘gateway to the Pacific’ after decolonisation. It remains a hub for the Pacific. Several important regional initiatives, such as the Pacific Islands Forum Secretariat and the University of the South Pacific, are based in Suva. The British allowed colonial plantation owners to import large numbers of indentured labourers from India and entrenched the political position of indigenous Fijians as landowners, a situation that has led to an uneasy ethnic basis to contemporary Fijian politics and economics. This tension has been part of the mix of factors behind the coups in Fiji’s recent history. Fiji has a booming tourist industry as well as struggling sugar and garment-production industries.¹

Potential of tuna fisheries

Fiji, lying 17 degrees south of the equator, is on the periphery of the richest tuna grounds, which lie between 10° north and 10° south of the equator, so it does not have the same potential for development from tuna fisheries as some of the Pacific island countries further north. Fiji’s total allowable catch (TAC) for the three main longline tuna species—bigeye, yellowfin and albacore—has been set at 15,000mt, as an interim measure according to the precautionary principle based on catch data from the 1990s, which was felt to be unreliable (Government of Fiji 2002). Consultative meetings for the Tuna Management and Development Plan set the number of licences at 90 (Turaganivalu, pers. comm.), which later was increased to more than 100. Based on many years’ experience in the fishery, however, managers from Fiji Fish and Solander (Pacific) feel that the maximum economically sustainable annual catch for Fiji’s Exclusive Economic Zone (EEZ) was less than the 15,000mt set in the Tuna Management and Development Plan, and that 60 licences should be the upper limit.

Map 4.1 Fiji



Source: Youngmi Choi, Secretariat of the Pacific Community, Noumea, New Caledonia.

History of development

Pole-and-line

A surface skipjack fishery started in Fiji in the 1970s with surveys of fish and bait fish from 1970 to 1973 under a United Nations Development Program (Pafco 2000). There was no private-sector interest in developing a pole-and-line fishery so the government established Ika Corporation under the Land and Development Authority (Stone, pers. comm.). In the early 1970s, the Fisheries Department built a pole-and-line vessel that was a cross between American and Australian-style pole-and-line vessels. The Fisheries Department also bought a second-hand Japanese pole-and-line vessel. These two vessels were used by Ika from 1975. Later in the 1970s, Ika acquired several more vessels from Japan, using aid money from New Zealand and other funds (Stone, pers. comm.). Fiji's pole-and-line catches increased from 700mt in 1976 to a peak of 6,000mt in 1989 (Government of Fiji 2002).

The Pacific Fishing Company (Pafco) cannery at Levuka on Ovalau had been the main market for the domestic pole-and-line fleet, but Pafco prices for skipjack fell to a level that was unprofitable (Hufflett, pers. comm.). By that stage, Pafco was loining albacore for Bumble Bee and did not rely on supply from the domestic skipjack fishery. The Fisheries Department did not intervene to have the government-owned Pafco support the domestic skipjack fishery, so the fishery declined (Stone, pers. comm.).

In 1983 Robert Stone, who had been managing Ika, set up a private company pole-and-line fishing for skipjack, eventually running two vessels. He explored new markets, including for the product *tataki*—seared then ultra-low temperature frozen packaged skipjack loins sold in Japan. By the early 2000s, Stone had sold his vessels and left the fishery due to falling margins.

Solander (Pacific) was registered as a Fijian company in 1988 and began as a pole-and-line fishing company targeting skipjack for the Pafco cannery. Since the cannery prices for skipjack were low, Solander moved out of the skipjack fishery and changed to longlining targeting sashimi markets in mid 1992.

In 2002, Tosa Bussan (Fiji) purchased a second-hand 59-gross registered tonnage (GRT) pole-and-line vessel from Miyazaki in Japan and started fishing in the Fijian EEZ. The vessel was crewed entirely by Fijians. Tosa Bussan intended originally to establish a small fleet to produce *tataki* for the Japanese market (see below) but discovered that the Fijian skipjack fishery was less productive than hoped because it was uneconomical to fish during the off-season for skipjack. Its skipjack vessel could catch only 500mt annually, whereas in Solomon Islands a pole-and-line vessel of similar capacity could catch 1,500mt annually. Tosa Bussan decided it would be unprofitable to expand its pole-and-line venture further. As of September 2005, this single pole-and-line vessel was still supplying the Tosa Bussan processing plant and it was intended that this arrangement would continue (Nakano, pers. comm.), but the main focus of the company had shifted to skinless yellowfin loins supplied by longline vessels.

Longline

When monofilament technology and smaller longliners (less than 60GRT) were introduced to the Pacific in the mid to late 1980s, Fiji was one of the first countries to develop a domestic industry using these vessels. The Fijian dollar was devalued by 35 per cent in 1987, which encouraged export industries. Air Pacific started direct passenger flights from Nadi to Japan in 1988 as part of a move to deepen the Fiji–Japan bilateral economic relationship, and this gave the longline industry airfreight connections to Japan. After the advent of these flights, there was a great deal of Japanese private-sector investment in tourism enterprises in Fiji (Turaganivalu, pers. comm.). Growth in the tourist sector increased demand for air links and increased prices in the domestic market for tuna.

Fiji Fish was the first to fish by the longline method in Fiji in 1988 with the FV *Sunbird*. The fishery targeted the sashimi market and also supplied albacore for the cannery market. Vessel numbers increased between 1992 and 1995, peaking at about 90 vessels, then declined, then increased again from 1999. Since 1997, Fijian longliners have also fished in the waters of other coastal states and international waters. In 2000, Fiji's longline catch was more than 11,000mt, with an estimated market value of F\$150 million (Government of Fiji 2002).

Investment in the longline fishery boomed again in the early 2000s with many new vessels entering—peaking at more than 100 vessels—until falling catch per unit of effort (CPUE) rates caused many vessels to withdraw from the fishery from 2004. About only 50 vessels had been licensed by September 2005, and possibly another 10 would apply by the end of the year. The CPUE drop and increasing fuel costs meant many vessels were tied up in the harbour. Several owners had gone bankrupt. The companies that managed to survive the low catch years hoped that with fewer vessels the catches would start to increase. The drop in supply had already boosted prices, but for a sustained industry recovery the CPUE would also need to increase (Southwick, pers. comm.). Despite the decline in active vessel numbers in 2005, Fiji still had the largest longline fleet of any of the Pacific island countries (Langley 2005).

The longline fishery in Fiji's EEZ was not impacting significantly on the stocks of the target species. In conjunction with the heavy fishing mortality occurring along the migration paths in equatorial waters, however, Fiji's fishing effort had brought down the numbers of fish enough to damage the economic viability of the fishery in recent years (Langley 2005). The high-value (bigeye and yellowfin) proportion of the catch therefore decreased as fuel and other input costs rose, squeezing margins for the longline fishery since 2001. This trend pushed Fiji-based operators to travel outside Fiji's EEZ to find fish (Southwick, pers. comm.). Since 2002, 20 per cent of the Fijian fleet's catch was from the Vanuatu EEZ, 20 per cent from international waters, some from Solomon Islands' EEZ and a small amount from Tuvalu's EEZ (Langley 2005).

Interviewees from longline companies Solander and Fiji Fish said they believed Pacific stocks of yellowfin and bigeye were even more damaged by overfishing in 2005 than

scientists from the Secretariat of the Pacific Community (SPC) were estimating at the time (Hufflett, pers. comm.; Southwick, pers. comm.). In 2002, Fiji Fish's fleet caught 20 yellowfin a day, but in 2005 they were lucky to catch two or three (Southwick, pers. comm.). Fiji Fish said it started 'sounding alarms' about the stocks in 1995 but was told by the SPC fisheries scientists that it was being too pessimistic (Southwick, pers. comm.). Solander managers also first picked up the CPUE decline in their company catch statistics in the late 1990s (Hufflett, pers. comm.). Based on a CPUE decline for albacore noticed since 2003, Grahame Southwick said he feared the same thing that happened with yellowfin and bigeye was happening with albacore: when it became economically unsound to target other species, fishers began targeting albacore (Southwick, pers. comm.).²

Albacore has made up the largest part of the catch from the Fijian EEZ. Albacore was sold mostly frozen for the US cannery market, with growing chilled sales for export to places such as the United Kingdom (Government of Fiji 2002; Dunham, pers. comm.). This species had a recruitment problem in the 1970s and 1980s but appeared to have recovered by the 1990s. There was a sudden drop in albacore CPUE in 2003, then a slight recovery in 2004. Some of the recent drop could have been due to increased fishing, but it also appeared to be caused by oceanographic effects. Albacore as a species is relatively resilient to longline fishing because it matures and spawns at a younger age (smaller size) than the relatively large, older fish caught by longliners (Langley 2005).

Yellowfin and bigeye catches were destined for the chilled and frozen sashimi markets. In 2002, Fiji's chilled tuna exports were worth about F\$160 million annually (Government of Fiji 2002; Hufflett, pers. comm.). These species had declined as a proportion of the Fijian catch since the early 2000s, concurrent with a region-wide recruitment problem noticed by SPC stock assessments.

In the 1990s, Fiji Fish and Solander were joined by Chinese longline companies.³ Since Fiji had relatively low wage costs, there were opportunities for locals to be employed on Chinese vessels. Some longline equipment was manufactured in Fiji. There were private and government slipways in Suva used by the Chinese fleet. Chinese vessels liked Fiji because of its infrastructure, services, cannery and airfreight. Most of the Chinese vessels' catch was albacore for the cannery market, with some bigeye, yellowfin and occasionally billfish sent to the chilled-fish markets overseas (McCoy and Gillett 2005).

By 1997, there were seven Chinese longliners based in Fiji. Since 2000, increases in the Chinese fleet in the Pacific have mostly been in Fiji (McCoy and Gillett 2005). Fiji was thought to be the most likely of the Pacific island countries to benefit from increases in China's ultra-low temperature (ULT) freezing technology longline fleet (McCoy and Gillett 2005), although falling CPUE meant a fall in the number of Chinese-owned Fijian-licensed vessels in 2005. As of 2005, an 'undetermined' number, possibly 20–30, of large-scale (more than 100 gross tonnes) Chinese vessels were based in Fiji without being licensed to fish there. They seem to have arrived in 2003. It was thought they fished in Vanuatu and on the high seas, and it was not clear whether they trans-shipped entirely in Fiji or trans-shipped a portion of their catch on the high seas (McCoy and Gillett 2005).

The China National Fishery Corporation (CNFC), a state-owned enterprise reputed to be the largest fishing company in the world with more than 65,000 employees, had a resident office in Lami. Connections between Chinese businesses and the vessels they represented, either through charter or ownership, were not entirely clear in Fiji. Fijian-based agents for Chinese longliners were less in control of the fleets than in Micronesia, where all supply and marketing was done by the agent. In Fiji, only three or four of 10 agent companies were involved in packaging for export. Chinese vessel operators sold their fish at a set price to these agents (McCoy and Gillett 2005).

Managers from the 'veteran' companies of Fiji's domestic longline fishery, Solander and Fiji Fish, felt that the increased numbers of mainland Chinese vessels operating from Fiji had damaged the fishery and they predicted they would cause more damage in future unless they were regulated more tightly (Lucas, pers. comm.; Hufflett, pers. comm.; Southwick, pers. comm.). Solander company statistics noted trouble with bigeye and yellowfin catches as early as 1997, but the drop was more pronounced after 2002. The sharp decline in CPUE, which caused large losses in 2003 and 2004, coincided with the influx of many more longliners (mostly Chinese) to Fijian waters than had fished there previously, and they believed the drop in CPUE was due to the increased effort in Fiji's EEZ.

Solander and Fiji Fish managers felt strongly that the Chinese vessels must be subsidised in some way, because it seemed impossible that they could be profitable. They also felt that the Chinese fleet was going to drive many other fleets out of business in the Pacific because the prices at which the Chinese fleet sold their catch on world markets brought the price down too low for non-subsidised fleets to compete (Southwick, pers. comm.; Hufflett, pers. comm.). Solander managers suspected that the Chinese vessels flagged elsewhere, such as Vanuatu, operated under less strict rules and therefore had unfairly lower operating costs.⁴

By 2005, the Fijian longline tuna fishing industry was composed of three main interest groups. The first was the veterans of the domestic industry, represented by Fiji Fish and Solander. The second was the sector of the industry substantially owned and managed by mainland Chinese companies. The third sector was the group of indigenous vessel owners who entered through the post-2000 affirmative action policies of the government to subsidise and encourage indigenous Fijian ownership of tuna industries (Turaganivalu, pers. comm.).

Solander Pacific began longline fishing in Fiji in 1992, after pole-and-line fishing in Fiji since 1988. Solander is a private family company based in Nelson, New Zealand. Until 1994, it was wholly New Zealand owned. In 1994, the Fijian government required Solander to sell down 30 per cent of its shareholding to Fijian citizens. As a consequence, Ratu Cokanauto Tu'uakitau—a senior member of the Great Council of Chiefs—became the chairman and local shareholder of Solander Pacific.

Solander Pacific generated gross sales of between F\$12 and \$20 million annually, turning a profit every year except 2003 and 2004, when substantial losses were incurred as the CPUE dropped drastically. As of September 2005, it seemed that catches had recovered somewhat,

although concurrent increases in fuel and other costs meant margins were lower than they had been with similar catch rates in the past. To September 2005, the company calculated it had invested more than F\$12 million in the country, including \$8.9 million on the fleet and \$2 million on onshore infrastructure for processing (Hufflett, pers. comm.).

Solander Pacific's fleet in 2005 consisted of 11 vessels, all of which were 20–30 years old. Most were second-hand Japanese vessels, and would soon need replacing. New vessels cost about NZ\$2.5 million each. The company employed about 250 people and 100 casual workers. The total number of expatriates were: one New Zealander local director; one New Zealand superintendent engineer, who worked on the shore base; and two New Zealand staff on the fleet (all men). The number-two manager was an Indo-Fijian woman who managed the company's finances and marketing.

Fiji Fish, based in Lami, near Suva, is a group of 14 companies owned by Grahame Southwick. Fiji Fish's main business is longline tuna fishing for the sashimi market and associated businesses such as packing and marketing. The companies were split to maximise tax advantages, since fishing and processing were tax-free activities, but marketing, cold storage, fishing gear supply and other related businesses were not tax free. The group of companies had a combined annual turnover of F\$120 million in the past, but with the bad conditions in the Fijian longline industry since 2002 the annual turnover was more like \$90 million.

Of the 40 vessels Fiji Fish operated in 2005, it owned 15 outright, and 30 per cent of each vessel in the rest of the fleet was owned in joint ventures with Taiwanese vessel owners. Their vessels were all 20–25m, which Fiji Fish believed was the right size for the Fijian fishery. For the 15 fully locally owned boats, the whole crew were Fijian except the captains, who were Korean. For the 25 jointly owned vessels, half of the crew were Fijian (as per licensing regulations) while the other half were a mixture of Indonesians, Filipinos and mainland Chinese.

Fiji Fish sends sashimi to the Japanese market and fresh-chilled albacore to the United Kingdom. Airfreight from Fiji to London via Sydney cost about F\$6–7 a kilogram in 2005 (Dunham, pers. comm.). Half of the Fiji Fish fleet did not fish in the Fijian EEZ in 2005, but on the high seas, and in Solomon Islands and Vanuatu, which were more productive for yellowfin and bigeye. Sashimi could not be offloaded in Solomon Islands or Vanuatu, however, partly because of a lack of processing facilities, but mostly because of a lack of airfreight routes out of these countries. The vessels spend 10 days each trip steaming to and from Suva, and two days in port, so many days each month are wasted fishing time and fuel. In addition, fishing so far away from the offloading base meant fish stayed on the vessels for up to 35 days, which meant the first 15 days or more worth of catch (40–50 per cent) was no longer of high enough quality to sell on the sashimi market. About 15 per cent of the fish that could no longer be sold chilled was sold frozen to canneries at a fraction of the price, and the rest was 'thrown out as pet food in the local market'.

Fiji Fish had analysed the economics of getting around this problem. One option considered was to loin and freeze the catch at sea for the first couple of weeks, but according

to its calculations lower prices achieved for this product meant it was not economical. The fresh chilled market is the only one that 'pays a good enough price to justify going out and catching the fish' (Dunham, pers. comm.).

The solution Fiji Fish settled on was to invest in three large transport vessels that were to go out to the fishing grounds to collect the catch and bring it back to Fiji, while the fishing vessels stayed fishing. Fiji Fish estimated that even after the extra costs of buying and running the transport vessels were taken out, the increased productivity of the fishing vessels should amount to F\$3–400,000 more in income per vessel a year.

Purse-seine fishery

From 1980 to 1985, a New Zealand company conducted purse-seining in Fiji with two vessels as a feasibility trial. The US fleet has also fished occasionally in Fijian waters on free-swimming schools or logs. Skipjack were usually not concentrated enough to make purse-seining in Fijian waters as attractive as in other, warmer waters, except during the prolonged El Niño event of 1993–94 (Government of Fiji 2002).

Distant water access fleet

The domestication policy basically meant a ban on distant water fleets operating in Fijian waters. Japanese purse-seine fleets operating in international waters and other areas near the edge of Fiji's EEZ boundary sometimes drifted over the boundary and fished in Fiji's EEZ. This was recorded through the vessel monitoring system so the Japanese fleet retrospectively paid access fees for these transgressions (Government of Fiji 2005).

Bait fishery

Fiji's longline fishery has relied on frozen imported bait. There was a local bait fishery in the past, attached to the pole-and-line fishery. According to Robert Stone, since the decline of the pole-and-line fishery, there were few people left with knowledge about local bait grounds and how to fish them effectively. Bait-fish access and costs could be affected by the 2004 Customary Fisheries Bill.

Fish aggregating devices (FADs)

FADs were first deployed in Fiji in 1981. The Fisheries Department and Ika fishing company maintained FADs during the 1980s and 1990s (Government of Fiji 2002). Without a substantial surface skipjack fishery, it has not been necessary to maintain a FAD program for the industrial fishery. FAD projects have been continuing for the small-scale and artisanal fishery (see below).

Small-scale coastal

Small-scale coastal fishing for tuna has been as difficult to sustain in Fiji as it has been elsewhere in the Pacific. Under the Commodity Development Framework funding, the Fisheries Division in 1999 promoted small-scale fishing around FADs by subsidising 36 locals in the Suva area to buy 7.2-metre fibreglass skiffs with 40-horsepower outboard

motors and fishing gear. Local fishers used trolling, vertical longlining and mid-water handline methods. Larger yellowfin and bigeye were sold to local processors for export; the rest of the catch was sold direct to the public or buyers who sold locally. Proceeds from the catches were to be used to pay off loans for the vessels and gear. As of 2002, only six to 12 of the 36 fishers in the program were still fishing around the FADs; the rest were fishing inshore or had sold their vessels and gear (Government of Fiji 2002).

Game fishing

There were game-fishing clubs in Suva and Pacific Harbour that held regular tournaments. Several of the main tourist areas had vessels available for international tourists to charter (Government of Fiji 2002).

Processing

Pafco. The Pafco cannery was established by the Japanese company C. Itoh at the Pafco trans-shipping base at Levuka in the early 1970s. The first market in 1974 was canned albacore to Bumble Bee Seafoods of the United States. In 1978, the Lomé Convention opened up markets in the United Kingdom under the John West brand; in 1984, Pafco also started selling to Sainsbury's and other generic brand owners. In 1987, C. Itoh withdrew from the cannery and Pafco was left insolvent (Pafco 2000). The company was saved by a contract with Bumble Bee to loin albacore for its canneries. Pafco lost interest in the skipjack market in the United Kingdom, so Solomon Taiyo became the main supplier from the Pacific (Stone, pers. comm.). In 1992, the Pafco cannery underwent a major overhaul funded by the Australian government (worth A\$17 million) (Pafco 2000). A six-month long industrial dispute and Cyclone Kina meant that 1993–96 were bad years, so in 1997 the government injected F\$10 million into the company. Then, in 1999, the first five-year agreement between Pafco and Bumble Bee was finalised. The Fijian government injected about F\$14 million in 2000–02 to upgrade the Pafco facilities (Government of Fiji 2002) to enable the development of Hazard Analysis Critical Control Point (HACCP) systems and compliance with EU food safety regulations (as well as regulations for Australia, Canada, the United States and the international *Codex Alimentarius*) (Pafco 2000). A second five-year agreement was signed in 2004. Management thought it likely that, unless something happened to the resource, Pafco's five-year agreement with Bumble Bee would be renewed for a third time in 2009.

Pafco was 98 per cent owned by the Fijian government, with the remaining 2 per cent owned by Ovalau landowners (Pafco 2000). As part of the arrangement with Bumble Bee, Pafco was controlled by a non-executive board of directors headed by a non-executive chair—all of whom were government appointees—while the day-to-day operations were directed by Bumble Bee managers working with Pafco managers (Pafco 2000). Bumble Bee and Taiwanese company FCF Fishery had an arrangement whereby FCF supplied all the fish to the Pafco cannery. In addition, longline companies operating out of Suva supplied the Levuka base with albacore and other fish not suitable for chilled exports (Dunham, pers. comm.).

Since the first five-year agreement was signed between Pacfo and Bumble Bee in 1999, the Pacfo plant has operated under, and sold all exports through, Bumble Bee. Productivity rates and quality rose under Bumble Bee management. The plant processed about 30,000mt of round fish annually (27,000mt albacore and 3,000mt skipjack, bigeye and yellowfin), with a yield rate of about 55 per cent (for albacore; less for skipjack), making mostly cooked loins exported frozen to canneries in California. It was not worth exporting canned fish to the United States because of the duty on canned tuna in that country. Pacfo canned 38,000 cases of tuna (48 cans to a case) for Clover Leaf of Canada (which had no duties on imports of canned fish). Flake tuna left over from loining was canned by Pacfo for the local market—200,000 cases of 48 cans annually. The general manager did not think there was much point in the Pacific trying to export to the European Union because the market was too far away and too competitive, with producers from the Seychelles, Africa and Ecuador already producing canned fish with cheaper operating costs (Guenegan, pers. comm.).

In 2005, Pacfo employed about 800 locals, with five or so expatriates in senior management positions. The company had an employees' union that managed industrial negotiations in 2003 to secure a pay increase of 60 per cent over two years. This brought the average hourly rates of pay for unskilled labour to F\$2.75, and for skilled labour to \$3.50 per hour, which in addition to high freight costs made Levuka one of the more expensive places for tuna processing in the region (Guenegan, pers. comm.).

Pacfo's strengths included preferential EU market access (under the Cotonou Agreement), its strategic location near the rich fishing grounds of the Pacific Ocean, a good water supply and a skilled, trained workforce. Pacfo's weaknesses were the high costs of freight and other internal and external operating costs, no economy of scale and lack of capital (Pafco 2000).

The Fijian government was committed to maintaining Pafco at Levuka for social reasons, to make the communities on Ovalau Island economically viable. It was this commitment that influenced the Australian government's decision to fund the 1992 upgrade of the Pacfo facilities. Up to 70 per cent of the available workforce in Ovalau worked for Pafco. Bumble Bee was committed also to being based at Levuka for social reasons, but managers pointed out that this increased their operating costs because of the additional leg for freight and a restricted labour supply. (Guenegan, pers. comm.; Gupta, pers. comm.).

The social aspects of Pafco's operations have always been important. According to the public relations officer, when Pafco was first established at Levuka people were able to build corrugated-iron houses. But there were also negative social impacts: Levuka became known as the 'boozing capital' of Fiji because a lot of money was spent on alcohol (Navuetaki, pers. comm.). Throughout the years, Pafco has caused social change on Ovalau, some of which has been viewed negatively (Emberson-Bain 1994). Social and political factors also impact on the viability of the company. As well as the extra costs incurred for being based at Levuka, social and political issues in the form of the 2000 coup damaged the company. Bumble Bee almost pulled out of the first five-year agreement

with Pafco during 2000, when the base was occupied by militants, who took all the stored fish (Navuetaki, pers. comm.). In order to try to ameliorate some of its social issues, Pafco employed a public relations officer, whose job included liaison with local communities. **Fresh chilled/frozen tuna.** With the development of domestic longline fisheries, several packing plants were established. The first was Fiji Fish's packing and freezing plant in 1989. In 2002, there were seven fresh-tuna processing and packing plants: one in Pacific Harbour, two in Lautoka, three for sashimi in Suva and one for *tataki* in Suva. Three more sashimi plants were planned by companies in 2002, as well as a cannery and two more post-harvest plants—all in the Suva area (Government of Fiji 2002). There were four sashimi-processing plants in the Suva area in 2005: Golden Ocean, Fiji Fish, Celtrack and Transpacific. A company called Hang Tong planned to open a fifth plant (Turaganivalu, pers. comm.).

Because there were so many packing plants, Solander did not have its own plant but contracted a facility next to its base to pack chilled fish for airfreight. Solander had its own small ULT freezing machine to process frozen sashimi for sea freight to Japan.

In 2000, Tokyo-based Tosa Bussan Inc. started a feasibility study around Pacific Harbour for pole-and-line fishing for a processing facility to produce *tataki*, a popular Japanese dish made of skipjack loins seared on the outside but raw on the inside.

The main mode of *tataki* production for Japan in recent decades has been large distant water pole-and-line vessels that travel around the globe for months at a time, processing the catch on board and storing it at ultra-low temperatures before returning to Japan to offload. This method was becoming too expensive in terms of fuel. Furthermore, Japanese regulations on the distant water fleet made them uncompetitive compared with other distant water fishing countries, and there has been declining interest among young Japanese people to go into distant water fishing.

Tosa Bussan could see that many Japanese companies were establishing processing factories in China, because labour there was cheaper than in Japan, but China was far away from the fishing grounds of the Pacific. Using China as a base for processing would thus be expensive in terms of freight. The richest skipjack fishing grounds were around Kavieng, Solomon Islands and northeast up to the Marshall Islands and Kiribati, but the business environment in all of those places was deemed unsuitable for establishing an onshore processing base. Tosa Bussan knew Fiji's fishing grounds were less rich than the countries to the north, but it was close to those fishing grounds. Fiji had regular, reasonably priced freight connections, adequate wharf infrastructure, good roads and telecommunications. In addition, it had a suitable labour force with wage rates comparable with those in China. Tosa Bussan thus selected Fiji as the location to try *tataki* production.

In 2001, Tosa Bussan (Fiji) built a processing factory in Walu Bay, Suva. Boxes of ultra-low frozen loins were exported by sea to Japan twice a month during the peak skipjack season. In 2002, Tosa Bussan's second-hand Japanese pole-and-line vessel came into operation supplying the factory but turned out not to be profitable.

Tosa Bussan (Fiji) incurred large losses during the first two years of operation and had no choice but to diversify. Its buyers in Japan helped out by paying for fish in advance.

To add to its *tataki* product, Tosa Bussan moved into ULT frozen skinless loins for the Japanese sashimi market. The company bought frozen bigeye and yellowfin from vessels that had been fishing outside the Fijian EEZ but which offloaded in Suva. In a month, Tosa Bussan (Fiji) exported five to six containers, or 100mt, of skinless loins. Since diversifying, the company had been profitable and, in 2006, it was planning to construct a new factory in Suva.

As of September 2005, Tosa Bussan employed 70 staff at the processing plant. Twenty-five Fijians were employed on the pole-and-line vessel. Two Japanese technicians came out to train the Fijian factory staff for the first year or two, but apart from them and the director, Nakano Toru, the entire workforce were Fijian citizens.

Small-scale gourmet products. There was one more kind of processing in Fiji: a small-scale gourmet processing plant at Pacific Harbour, producing a range of products, including cold smoked marlin, tuna jerky and tuna ham. According to the founder, Robert Stone, there were two keys to the success of this venture. One was finding a good distributor for export markets. The other was setting up systems in the small factory such that the quality and hygiene were up to importing-country requirements. (Stone, pers. comm.).

Trans-shipping, service and supply

According to Solander owner, Charles Hufflett, when he first visited Suva in the 1950s, it had a thriving service industry for ships. The Pafco base at Levuka started as a trans-shipping base for the Japanese distant water longline fleet in 1963, as a joint venture between the colonial Fijian government (which owned 10 per cent) and Banno Oceania, a company connected to the Japanese Ministry of International Trade and Industry (which owned 90 per cent) (Pafco 2000). The Japanese fleet had been operating from Kavieng in Papua New Guinea but was looking for a base closer to the centre of the Pacific Ocean. Fijians were against anything connected to Japan because of memories of World War II, but Levuka on the island of Ovalau at that time was suffering economic hardship because of the collapse of the copra market in the late 1950s, and the consequent shift of trading activities to Suva (Pafco 2000). The chiefs of the area convinced people that the continuity of their society depended on something like a fishing base, so they agreed. The copra-exporting facilities were transformed to a fishing base with large cold-storage sheds (Navuetaki c.2002). In 1973, the trans-shipment base was converted to a cannery and Levuka was no longer used as a trans-shipping base.

Since 2000, the Fijian government has aimed to develop the infrastructure and logistics networks needed to further encourage tuna vessels in the region to come to Fiji to offload their catch for processing, and for vessel repairs and maintenance (Turaganivalu, pers. comm.). Fiji's central location in the Pacific and its relatively good infrastructure and transport connections meant it was a natural choice for trans-shipping. The air connections were some of the best in the region for sashimi freight. The air links also made Fiji a good point from which to fly crew in and out. Fiji's roads and telecommunications are also better than many countries in the region. Suva has become a hub for the longline tuna fisheries of the region. As of the early 2000s, foreign vessels trans-shipped their catch

under a permit issued by the Ministry of Fisheries and Forests. Most of the catch went into freezer vessels for export, with some by-catch sold for local markets, some catch going to Pafco and some bought by the Foreign Fish Traders Association in Suva. Some Fijian stevedores (six–eight per trans-shipment) were used for trans-shipping, along with the crews of the vessels offloading. Some local tradesmen were also employed servicing vessels in Suva (Government of Fiji 2002). Fiji’s sea and air connections meant it could provide a quick turnaround for crew and provisions, as well as a port from which to send fish to international markets. By 2005, more and more agents for distant water longline fleets were basing themselves in Suva (Turaganivalu, pers. comm.).

Under national development objectives since 2000, the government wanted to improve the wharf facilities used by the longline industries, as part of a F\$230 million plan to improve the port facilities around Suva. This plan included a fishing jetty at Lami, for which the Japanese government had committed up to F\$10 million in aid money (Turaganivalu, pers. comm.). In addition, there was a plan to build a large slipway at Lautoka.

Citizens’ groups in Lami, however, opposed the plans for the new jetty, arguing that they already had enough industrial infrastructure in their area and wanted future developments to be social amenities, such as sports and recreational facilities (Turaganivalu, pers. comm.). The Lautoka local government also decided that it was better to focus on tourism as a development opportunity rather than industrial fisheries infrastructure, and so rejected the plan for the slipway. The national Cabinet agreed that these concerns were reasonable and put aside the plans for Lami and Lautoka (Turaganivalu, pers. comm.). In terms of community consultation, this outcome was successful, but it frustrated the fishing industry and contributed to industry doubts about government support for their sector (Guenegan, pers. comm.; Hufflett, pers. comm.).

Domestication and indigenisation

One of the notable features of Fiji’s fisheries development policy in the past decade has been the effort to domesticate and indigenise tuna fisheries. Distant water fleets have not been licensed to fish in Fiji’s EEZ. Vessels owned by overseas companies have to be registered and flagged in Fiji, and fishing companies operating in Fiji have to be at least 30 per cent owned by Fijian citizens (Turaganivalu, pers. comm.).⁵ As well as the expectation that locally based fishing companies will bring more benefits to the Fijian economy than distant water fleets, other motivations behind the policy to have vessels flagged in Fiji have included: i) the greater control government can exert over locally flagged vessels, and ii) the need to establish a solid catch history in Fiji’s zone, the adjacent high seas and from landing for onshore processing of all vessels in ports, to strengthen Fiji’s case for a reasonable allocation of the Western and Central Pacific Fisheries Commission (WCPFC) TAC (Turaganivalu, pers. comm.).

The domestication policy alone, however, resulted in a fishery largely owned and managed by non-indigenous nationals, resident expatriates or foreigners who established

local companies. Especially since the 2000 coup, having indigenous Fijians own and manage companies has been a high political priority reflected in fisheries policies. For example, the Social Justice Bill passed by Parliament in December 2001 specified that indigenous Fijians be given preferential access to new fisheries licences (Government of Fiji 2002). The Fiji Customary Fisheries Bill 2004 gave administrative effect to the *de facto* recognition of Fijian and Rotuman resource ownerships rights in coastal areas in line with indigenous ownership under customary tenure of 83 per cent of Fijian land (Aqorau 2005).

The Customary Fisheries Bill emerged as part of a more general government blueprint for the protection of indigenous rights presented to the Great Council of Chiefs after the 2000 coup (Looking Glass Design c.2001).

The Tuna Management and Development Plan cited 'uneven distribution of wealth and [an] economic gap between the two major races...as the major cause of political turmoil and unrest in the country'. The plan therefore sought to 'enable Fijians and Rotumans to fully exercise their rights of self-determination within the unitary State of the Republic of the Fiji Islands' by 'bridging the economic gap' between indigenous Fijians and resident expatriates and Indo-Fijians through offering development opportunities in tuna industries to indigenous Fijians on a preferential basis (Government of Fiji 2002).

Indigenous Fijians were given preferential licensing conditions, and 20 longline licences were reserved for indigenous Fijians. 'Any application by an Indigenous Fijian or a company that is minimum 51% owned by an Indigenous Fijian is automatically eligible for an Offshore Licence for longlining tuna' (Government of Fiji 2002).⁶

The Seed Capital Assistance Revolving Fund (SCARF) Program in the Ministry of Fisheries and Forests was another affirmative action mechanism. Indigenous Fijians wishing to own tuna businesses were assisted by an investment program whereby the ministry put up one-third of the equity for the business while the Fiji Development Bank provided the other two-thirds of the loan, of up to about F\$200,000.

The Development Bank required indigenous vessel owners to commit some of their own equity by using assets such as property as security against the loans (Turaganivalu, pers. comm.). Indigenous vessel owners whose businesses failed risked having their assets seized and sold to repay the loans (Turaganivalu, pers. comm.). The decline in CPUE in Fiji occurred just as indigenous Fijians became vessel owners under the SCARF program. The indigenous owners argued that even with subsidies in conditions with high fuel costs, low fish prices and low CPUE, it was too hard for them to meet the conditions of their loans and keep their businesses running (Turaganivalu, pers. comm.). Indigenous vessel owners were understandably discouraged by these setbacks, and their confidence in the feasibility of owning and managing a fishing business has been shaken considerably in recent years.

In 2005, the Fisheries Department was criticised because it was believed that the affirmative action policy was not having a noticeable improvement on the level of indigenous participation but was in fact enabling foreign investors to circumvent the rules.

Determinants of success

Synergies with tourism

In terms of chilled airfreight sashimi exports, Fiji's comparative advantage over other countries in the region lies in its tourism industry, which provides regular direct flights to markets in Asia and North America. In addition, the tourist population has generated a local market for sashimi tuna, just as it has in Cook Islands.

Human resources

Another advantage Fiji's tuna industries have is being close to the educational services of the University of the South Pacific (USP). For example, USP's Marine Studies Program runs a Seafood Safety (HACCP) Training Course, which is useful for the various post-harvest operations based in Suva and Levuka (Hufflett, pers. comm.). Fiji's pool of trained and experienced fishing crews from the now defunct Ika Corporation represents another advantage Fiji has over other countries in the region.

The manager of Tosa Bussan felt that Fijian employees were 'excellent' (Nakano, pers. comm.), and all interviewees agreed that Fijian fishers were as skilled as any, but interviewees also talked of difficulties with Fijian employees. Fishing company owners mentioned hiring Fijian crew who did one or two trips then quit or turned up to work drunk and had to be fired (Turaganivalu, pers. comm.). Fiji Fish owner, Grahame Southwick, said his Asian crews worked 'three times as hard' as his Pacific islander crews, reflecting their relative dependence on wage labour (Fijians are landowners). Fijian deck crew were paid about US\$300 a month. Chinese crews were paid US\$200–300 a month. Most Fiji-based Chinese longline operators believed that Pacific islanders would not work as consistently hard as Chinese crew, and that there might be language and cultural difficulties in a mixed crew (McCoy and Gillett 2005).

The fact that longline companies based in the Pacific can employ Asian crews is one of the factors contributing to their competitiveness. Fishing companies based in wealthy countries with regulations forcing them to employ expensive home-country crew (Australia, Japan, the United States) are being forced out of longline tuna fishing by their wages bills (Southwick, pers. comm.).

Trade access to the European Union

As an African Caribbean Pacific (ACP) country, Fiji's fishery products are exempt from tariffs in the European Union. Several interviewees said that Fiji had 'list-one' status with the European Union, meaning it was cleared to export to any European country. A look at the EU web site,⁷ however, reveals that Papua New Guinea is the only Pacific island country with list-one status. Apparently, Fiji was on track to attain list-one status in 2003, with a new *Health Act* intended to prepare the Department of Health to be a Competent Authority to verify the safety of food produced by Fijian companies (Turaganivalu, pers. comm.). The department, however, failed to meet all of the recommendations of the 2003 inspection rounds, so Fiji remains on list two (Batty, pers. comm.). This means Fijian companies can export only to EU countries with which there are bilateral agreements to accept imports.

Government services

According to Solander managers, the licensing system operating in Fiji has been complex, with licences taking too long to come through, discouraging investment. There was low security of tenure with the annual licence process, which Solander managers felt made banks less willing to lend to fisheries businesses (Hufflett, pers. comm.). Solander managers also cited taxation rules on depreciation as discouraging investment in the tuna sector. Taxation relief for fisheries industries was complicated and had changed over time.

Fuel prices

Fuel prices were a major problem for longline companies around the globe, especially in 2004–05. In 2004, Fiji Fish could buy fuel for US\$330 a metric tonne; in September 2005, the price was US\$710 a metric tonne. In order to try to save on fuel costs, Fiji Fish was planning to add transport vessels to its fleet, to minimise the time spent by fishing vessels steaming to and from port.

Governing tuna industries

In 2002, the Ministry of Fisheries and Forestry established the Management Services Division within the Fisheries Department to manage Fiji's tuna fisheries. The division was run using the management fees of F\$6,000 included in tuna-fishing licences (Government of Fiji 2002). With 60 licences, this budget amounted to \$360,000 in 2005. The division has cost just slightly more than that to run (Turaganivalu, pers. comm.), with the shortfall being covered by the ministry's general budget. The division performed duties such as data collection and analysis, international fisheries negotiations, licensing, monitoring, control and surveillance, and administration of fisheries development policies and projects.

In the Tuna Management and Development Plan, it was intended that a National Fisheries Authority (NFA) along the lines of Australia's Fisheries Management Authority and Papua New Guinea's NFA be created. The Fijian NFA would be governed by a board of directors representing 'the major interests in the fishery' (Government of Fiji 2002). Its role would be to control the issuing, renewal and replacement of licences, to collect licence fees and to enforce regulations (with the navy and police). As of 2005, the plan for an NFA was still being considered by Cabinet.

Data on catches had been unreliable up to the time of the SPC tuna development strategy report, so the Tuna Management and Development Plan committed to improve accuracy of the database for the purpose of management decision making (Government of Fiji 2002). By 2005, the Ministry of Fisheries and Forests, in conjunction with the SPC, had greatly improved data collection and analysis for Fiji's tuna fisheries.

Interviewees identified a couple of areas where fisheries management could be improved through human resources development in the Fisheries Department. The department did not have a legal officer in 2005; it had been using legal expertise from the Fijian Attorney-General's office and from the FFA (Turaganivalu, pers. comm.). Some industry

interviewees felt fisheries bureaucrats could benefit from training in principles of business management (Hufflett, pers. comm.; Stone, pers. comm.).

Consultation between government and industry

Fiji's fishery managers were aware of the importance of consultation with industry and had developed the Tuna Management and Development Plan (with FFA and SPC input) with a schedule of consultations with tuna company managers. All industry players were consulted widely during the formation of the plan in 2001 (Turaganivalu, pers. comm.). Effective consultation, however, in which all stakeholders feel they have an active voice in decision-making processes, is difficult to achieve. Some tuna industry interviewees said that although they had been consulted on the plan, and in principle approved of it, they felt it was delivered to them as a government policy rather than as something they had had a real role in shaping, and therefore 'owned' (Lucas, pers. comm.).

There has been active industry-government consultation in the past few years. Fiji Fish's Grahame Southwick estimated that he spent about 80 per cent of his time doing 'fish politics' instead of running his business. Since 2002, industry players have been consulted through meetings more than once a year in order to set up management measures from available options under the legislative framework for the next licensing period. A meeting for offshore fisheries was held on 28 September 2005 to discuss the latest data on stock assessments nationally and regionally, licensing measures for 2006 and harmonisation of national management measures with any regional measures that might come out of the 2005 WCPFC meeting. The outcome of the meeting was that industry would form three working groups to come up with suggestions for three different issues affecting the Fijian longline fishery: criteria for licences for 2006, subsidies for fuel and a more flexible model of access fees based on profit rather than a flat fee—to make it easier for vessels to cover their costs during years of no profit (Turaganivalu, pers. comm.).

At the time of fieldwork in 2005, veteran local companies, Fiji Fish and Solander, were lobbying government to institute regulations to require companies operating with demise charters on foreign-owned vessels to present financial records showing the local company, *inter alia*, i) paid market rates for chartering the vessel/s, ii) was properly registered and approved by the relevant domestic authorities, iii) put all operational costs through a local bank, iv) complied with Reserve Bank of Fiji regulations, and v) was not managed by the vessel owner in any way (Southwick, pers. comm.).

One of the questions industry raised during the offshore fisheries meeting in September 2005 was what was being done with the management fees paid as part of tuna-fishing licences. Apparently, industry people had not visited the Management Services Division to be shown what was done there, and had not been shown the division's comprehensive annual report.

The biggest concern industry has had about government regards unregulated, increased investment in longline fisheries in the early 2000s. The major problem identified was that the licensing system approved by Cabinet in 1994 needed urgent redress. One of the

issues was that senior officials were selling ‘approval-in-principle’ licences (options for companies to reserve licences before finding a vessel). Many more spaces were sold in 2001 than there were licences to issue (Turaganivalu, pers. comm.). The Tuna Management and Development Plan addressed shortfalls in the licensing regime and investigations into licensing problems were launched by Cabinet in 2003, first through the Public Service Commission, to assess the practices of Fisheries Department staff in terms of the Public Service code of ethics. One senior official was suspended and demoted. The police began criminal investigations in 2005.

Fees and licensing were regularised under the Tuna Management and Development Plan, and accountability was enforced by the Public Service Commission and criminal prosecution process, but some industry interviewees still felt that too many licences were being issued (Hufflett, pers. comm.; Southwick, pers. comm.). These interviewees also worried that recent generosity by the Chinese government in large public construction projects in Fiji might be linked to increased fisheries access by the growing Chinese fleet. The licence numbers had declined by 2005 for economic reasons without government intervention, but these industry interviewees wanted government limits imposed on the fishery as well.

Despite progress in enforcing accountability in fisheries management, industry interviewees still saw room for improvement in the governing of Fiji’s tuna fisheries. According to Jean-Claude Guenegan of Bumble Bee, who worked at the Pafco plant in Levuka, ‘politics gets in the way’ of Fiji’s tuna industry. He was referring to the 2000 coup, and also said that business was disrupted each time there were elections: ‘Fiji has the resources to have really good tuna fisheries development but sometimes the government messes up the opportunities’ (Guenegan, pers. comm.). One example he cited was the government rejecting offers from FCF Fishery and Japanese aid to fund slipway and fishing jetty infrastructure at Lautoka and Lami. He also referred to what he saw as overzealous enforcement of Institutional Strengthening Programs (ISPs) by Fijian officials. In September 2005, managers from Pafco’s international partner, Bumble Bee, visited Fiji and said that government red tape, especially regarding ISPs, was threatening the economic viability of the Pafco plant and therefore all the jobs at Levuka. Bumble Bee representatives said Fiji was being stricter about compliance with security standards than even the United States, and since Pafco competed directly with Pago Pago these requirements were decreasing Pafco’s competitiveness (Guenegan, pers. comm.).

Creating an enabling business environment

Some aspects of the Fijian government’s approaches to tuna industries showed an interventionist tendency, such as the ideas for small-scale fisheries development in the Tuna Management and Development Plan, and the affirmative action indigenisation policies. On the whole, however, in most government approaches to Fiji’s tuna industries, the aim was to provide infrastructure and an environment conducive to private-sector development.

Table 4.1 **Fiji: indicators of domestic development, 2001**

	Locally based vessels active	Cannery/loining facilities	Sashimi packing facilities	Fijian nationals jobs on vessels	Fijian nationals jobs on shore	Frozen tuna exports (mt)	Fresh tuna exports (mt)
Fiji Fish	23 LL	0	1	300	200	272	529
Solander	11 LL	0	0	109	33	416	1,037
Other companies	62 LL	1	4	459	407	820	1,970
Tosa Bussan	1 PL	0	1	25	56	74	94
Pafco	0	1	0	0	800	0	0
Total	96 LL 1 PL	2	6	893	1,496	1,582	3,630

Notes: mt: metric tonnes. LL: longline. PL: pole-and-line

Source: Gillett, R., 2003. *Domestic tuna industry development in the Pacific islands. The current situation and considerations for future development assistance*, FFA Report 03/01, Pacific Islands Forum Fisheries Agency, Honiara, Solomon Islands.

Conclusion

The development of Fiji's domestic longlining industry has been a success story that emerged independently from the private sector (Tables 4.1 and 4.2). For a period, Fiji's longline fishery and related fresh-fish processing businesses were clearly financially viable, but they have been hit hard in recent years with falling CPUE and rising fuel prices. Service and supply industries for trans-shipping longline fleets and small-scale gourmet processing businesses were also clearly economically sustainable. While Pafco has required large inputs of government funding, it has at least provided jobs and human resource training opportunities for people outside Suva. The way in which the tuna industry has been used as a tool to address self-determination issues through affirmative action policies has been problematic, and has contributed to the downturn in the fishery. The most pressing issue for Fiji's tuna fisheries is to implement sound fisheries management, domestically and regionally through the WCPFC, to return economic viability to the longline industry. The next steps will be to improve training and infrastructure to support fisheries, service and supply, and processing industries. Bringing more indigenous Fijians into leadership and ownership roles is a long-term vision requiring a great deal of training and building experience in business management.

Development aspirations and tuna

The aspirations for tuna resources contained in interviews with Fijians and the various documents about tuna management and development examined for this report covered roughly three main areas: wealth generation, social and political issues, and ecological sustainability. This combination is evident in various expressions of the aims and objectives of the Tuna Management and Development Plan (Government of Fiji 2002), which are to

Table 4.2 **Fiji: indicators of tuna development, 2004–2005**

Company	Domestic vessels: no. and type	Processing facilities: no. and type	Jobs for nationals: no. and type	Annual exports: volume and type	Annual domestic sales: volume and type	Distant water: vessels no. and type
Solander Pacific	10 longline	1 ULT freezing machine (processing and packing contracted out)	~ 100 fleet ~ 30 shore base	1,263mt frozen whole tuna 424 mt chilled fresh fish	0	0
Pafco	0	1 cannery/loining plant	800 factory	cooked frozen loins using 30,000mt round fish inputs	200,000 cases of 48 cans	0
Fiji Fish	40 longline 1 carrier	1 sashimi packing plant	370 fleet 150 shore base	38,000 cases of 48 cans most of 377mt bigeye and 18mt yellowfin exported chilled(some frozen); (some chilled) most of 2,236mt albacore exported frozen	10 per cent of frozen by-catch (2,747mt in 2003)sold locally	0
Tosa Bussan	1 pole-and-line	1 sashimi and tataki processing plant, including ULT facilities	25 vessel 70 shore base	1,200mt ULT skinless loins and tataki	0	0
Other companies	~ 10 longline 13 pole-and-line	3 sashimi packing plants	-	-	-	0
Stonefish	0	1 small-scale gourmet processing plant	-	cold smoked tuna , and billfish tuna jerky, tuna ham	Tuna jerky	0
Total:	~ 60 longline 14 pole-and-line 1 carrier	5 sashimi, 2 ULT 1 gourmet 1 cannery/loining	>1,500	Cans, loins, round whole chilled fish, round whole frozen fish, smoked and other processed fish		0

Notes: Apart from Tosa Bussan's local vessel, the other pole-and-line vessels active in Fiji were Japanese vessels using 'trip-based' licences in 2004. It was not clear whether these vessels also operated again in 2005. Fiji Fish's export figures are from 2003.

Sources: Interviews conducted September 2005. Amoe, J., 2005. *Fiji Tuna and Billfish Fisheries*, First Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission, Noumea, New Caledonia. Government of Fiji, 2005. *MS-Offshore 2004 Annual Report*, Offshore Management Services Division, Fisheries Department, Suva, Fiji.

- develop for maximum utilisation of the resource ‘without compromising the long-term economic, political and resource sustainability’
- establish what the sustainable limit of fishing effort is, set a sustainable catch limit, conserve and manage tuna resources
- distribute licences according to criteria that uphold government objectives, limit the number of licences issued and limit the TAC to optimise the returns to holders
- maximise economic returns by providing policy directions for government for development to increase economic gains from tuna fishing, recommending institutional changes that will increase revenue raised through licence fees, export and processing permits
- set licence fees to support management of the fishery and also provide benefits for all Fijians, have a ‘fair’ distribution of wealth from tuna industries
- establish a development program to address shortcomings in port facilities, legislation, training, social and gender issues and coordination across government agencies
- recommend institutional changes that will improve transparency and accountability, strengthen fisheries institutions, improve public confidence in tuna management and development
- have a well-trained industry.

Some of the kinds of development envisaged as helping to achieve these aims and objectives included

- continuation of the domestic longline fleet
- assistance to indigenous Fijians to become vessel owners
- further development of Suva as a longline trans-shipment port through improving service industries for fishing vessels
- promotion of tuna developments in the outer islands
- training for captains, engineers and other crew, training for processing employees and business training for indigenous resource owners
- staff development for the Fisheries Department (Government of Fiji 2002).

Wealth generation for the domestic economy

Most of the aspirations expressed regarding tuna resources in Fiji centred on the aim of capturing more wealth.

Licence fees. Fiji’s domestication policy banned distant water fleets, so distant water access fees were not a factor in the equation in Fiji, apart from small amounts paid retrospectively by the Japanese fleet when it strayed over the EEZ boundary. Domestic licence fees, however, were divided into a management fee, paid by all licensees, and an access fee, paid by all non-indigenous Fijian licence-holders. The management fees largely supported the Management Services Unit while the access fees went into consolidated revenue. Licence fees were thus a handy source of revenue, but were not nearly as significant an economic contribution in Fiji as in countries such as Kiribati. On the whole, capturing more wealth in the Fijian economy was about the domestic private sector generating economic activity.

Trans-shipping, ports and service industries. At the time of interview in September 2005, the government's strategy for making the most of the region's tuna resources was to develop Fiji as a hub for the regional longline industry. The Tuna Management and Development Plan targeted service industries as an area for further development through provision of processing licences to foreign companies that offload their catch in Suva, and through building a larger slipway to attract more vessels to be repaired in Suva (Government of Fiji 2002). It was also proposed that the government could tie trans-shipping access to the supply of reliable records of catch, and to employ Fijians as crew members, to allow vessels to set up a base of operations in Fiji without being licensed to fish in the Fijian EEZ (Government of Fiji 2002).

This strategy had been in place since 2000, but had not progressed due to local opposition to fisheries wharf developments in the planned areas (Lami and Lautoka). In addition, industry interviewees said there was not the full range of the necessary trades and skills for service industries available in Suva (Hufflett, pers. comm.). So, although the Fisheries Department had continued to address the needs of the service industries in meetings with other relevant government agencies for five years, there was still some way to go before the government fully realised aspirations to develop Fiji as a hub for the region's longline fleets (Turaganivalu, pers. comm.).

Processing. Aspirations regarding processing included maintaining the Pafco plant and trying to encourage indigenous Fijians to invest in processing businesses, including a long-term plan that 50 per cent of processing licences would go to indigenous Fijians. Development aspirations were generally focused more on indigenously owned fisheries development and ports infrastructure than on processing. When asked whether the Fisheries Department saw small-scale value adding as a direction to pursue, the reply was that this market was a small niche market, not as reliable or large as the sashimi market.

Human resources and training. The government intended to improve training facilities and programs to increase the numbers of Fijian skippers and engineers (Government of Fiji 2002).

Solander managers felt that local welding skills were very good, but in other areas there were not enough proficient local tradespeople. They felt that the Fijian government would have to either improve training or loosen immigration requirements, so that tradespeople could be brought in until the local pool of skills increased. At the time of interview, the government had no plan to employ foreigners to fill gaps in skills, or to target training of locals (Turaganivalu, pers. comm.).

Solander managers also felt that Fiji should have more post-harvest expertise (Hufflett, pers. comm.). They pointed out that Fiji was a major producer in the region—yet there was not one seafood industry food technologist. Solander sent its employees to the USP HACCP course and found it useful, but said they would like more coordination between that course and the various post-harvest courses offered under aid schemes, and also that a wider range of courses and more places would be helpful (Hufflett, pers. comm.; Lucas, pers. comm.).

Public-sector human resources were identified by the government as in need of improvement through 'institutional strengthening'. This was specifically with regard to environmental and fisheries science, training for observers and port samplers, and implementing a comprehensive logsheet and landings data collection scheme (Government of Fiji 2002).

The Tuna Management and Development Plan recognised the need for business training as well as fisheries training for success in owning and managing businesses, as did private sector managers.

Social and political issues

The 2000 coup damaged tuna industries for a period. Fall-off in tourist flights meant lack of freight capacity for sashimi exports. The Pafco cannery was occupied by militants, which nearly caused Bumble Bee to pull out of Fiji (Navuetaki c.2002). Fiji had largely recovered economically and in terms of government administration by 2005. A legacy of the coup is visible in government policies for affirmative action to encourage greater participation by indigenous Fijians in ownership of tuna businesses.

While ethnic issues dominated aspirations regarding social and political aspects of the future of tuna industries, there were also aspirations expressed about minimising social impacts more generally. The Tuna Management and Development Plan included a social impacts fund to be created from a portion of the access fees charged to the industry. The government also hoped to improve social and political problems in relation to tuna fisheries through greater consultation in decision making. A Social Consultative Committee was to examine regularly social impacts from the industry (specifically alcohol abuse and STIs) and distribute the social impacts fund accordingly. In addition, a training module was to be implemented for seafarers and their families to try to reduce the negative impacts on communities from tuna industries. Government recognised the need for more public awareness of fisheries and intended to address this through school curricula (Government of Fiji 2002).

Outer-islands tuna development

Fiji's aspirations for tuna development included distribution of opportunities and benefits from tuna industries in rural and remote areas. The Tuna Management and Development Plan included a FAD program for rural communities including technical assistance from the SPC, data collection systems and the building of three fisheries centres. Local fishers were to be subsidised to buy skiffs, outboard motors and fishing equipment. Fisheries training modules were to include money management, small business principles and community and family responsibilities in fisheries. A local business training institute was to devise these courses in conjunction with the SPC (Government of Fiji 2002). Pafco employed a Public Relations Officer to assist local communities to develop spin-off businesses to take advantage of the opportunities created by Pafco's operations on Ovalau (Navuetaki, pers. comm.).

Indigenisation

There were strong aspirations for indigenous Fijians to become leaders as well as employees in tuna industries. These aspirations focused largely on vessel ownership. Aspirations for greater participation by indigenous Fijians as reflected in the plan and in interviewees' comments equated vessel ownership with 'real' participation in the industry. Behind this idea is the desire to have the power and status of leadership in the sector. The main affirmative action mechanism to encourage indigenous Fijians to become owners of businesses in the tuna plan was the SCARF program's interest-free loans as seed funding to help indigenous Fijians and Rotumans become owners of vessels.

One problem with government policies aiming to have indigenous Fijians own medium-scale longlining businesses was that these businesses were costly, and therefore risky, and the marketing and trading involved was financially complex.

Going from a position of very little training, experience or knowledge in business management straight into ownership is fraught with risk. Robert Stone felt that the affirmative action policies were problematic in giving people money to own boats before they learned how to run a business.

Gender

Gender issues were raised as one of the social factors to be considered in aspirations for Fiji's tuna industries in the Tuna Management and Development Plan. Women bear the brunt of domestic violence from men's employment in fishing fleets, and the worst effects of social dislocation from prostitution occurring around fleets.⁸ Women's groups were some of the stakeholders consulted in generating the plan (Government of Fiji 2002). A Social Consultative Committee comprising women's and community groups was to be set up to distribute money from the social impact fund. The plan stipulated that information concerning opportunities in the fisheries sector was to be made available to 'young people and women in rural areas' (Government of Fiji 2002), and the ministry was to be 'proactive in recruiting and promoting women employed with the [Fisheries] Division, and ensuring that women are not only confined to office and secretarial duties' (Government of Fiji 2002).

Women made up a large proportion of the workforce in the Management Services Unit, not only in secretarial positions. Women were administering the data collection system TUFMANA and a woman was the acting CEO of the Department of Fisheries at the time of fieldwork in September 2005. Women made up a large proportion of office staff in the private sector too, as well as the bulk of the workforce at the Levuka Pafco plant and tuna-processing facilities in Suva. Agape Fisheries Limited had a woman CEO Betty Wong. However men tend to hold most senior management positions in the public and private sector.

Ecological sustainability

The Fijian government has given thought to ways in which the Tuna Management and Development Plan would ensure ecological sustainability. For example, environmental groups' concerns about by-catch of other species were to be addressed through the observer

program (Government of Fiji 2002). The Implementation Schedule of Activity linked sustainability to activities and responsibilities such as the setting of quotas, creation of reliable catch and by-catch databases, setting TAC limits according to stock assessment, and recommendations for mitigating environmental problems caused by fishing (Government of Fiji 2002). A commitment to resource management was manifest in improved data collection from logsheets, observer coverage and port sampling. Nevertheless, some industry interviewees still felt in 2005 that Fiji's fisheries management was not protecting the resources properly and that fishing effort (licences) needed to be reduced even further (Southwick, pers. comm.; Hufflett, pers. comm.). Some of the aspirations for improved management of Fiji's tuna resources included greater transparency and accountability, improved public confidence in Fiji's fisheries management, as well as improved effectiveness of government policies.

Recommendations

Despite having less rich tuna resources than some of the other Pacific island countries in this study, Fiji has greater opportunities and fewer constraints on developing industries to generate wealth from tuna because it has more infrastructure, and because its economy and society are more capitalistic.

Although licensing was subject to corruption in 2001–03, the fact that accountability was then imposed by the public service and justice systems at the insistence of the private sector showed that governance in Fiji was healthier than in many other Pacific island countries. In respect of governance, it is important for Fiji to

- maintain high levels of transparency and accountability for fisheries management and development decisions
- keep working on consultation with industry, and streamlining bureaucratic processes
- show industry what is being achieved with its management fees, for example, by the Management Services Division offering *ad hoc* tours for industry members and adapting the internal annual fisheries report for external use, thereby disseminating information about the fishery and its management to interested members of the public as well as industry.

Fiji's ethnic affirmative action policies have thus far not worked well in terms of facilitating indigenous Fijians' leadership in the sector through ownership of businesses. Indigenous vessel owners are struggling financially, and foreign investors have used the SCARF program to enter the Fijian fishery. To address this, it is suggested that

- potential investors be made aware that it is difficult for people with little business experience to be successful in their first attempt
- inappropriate and ill-advised indigenous investment be discouraged to reduce the impact of business failures

- as an alternative to subsidising vessel ownership through large up-front loans, promote a step-wise scheme to enable interested indigenous Fijians to gain training and experience in business management and/or in owning smaller fishing businesses before moving onto tuna enterprises requiring large loans
- consideration be given to tying licences to apprenticeship and training schemes for indigenous Fijians in financial and management aspects of business, and sponsoring indigenous Fijians to undertake tertiary business education combined with internship-style training in tuna businesses.

All the indicators suggest that the fishing end of the business has been increasingly competitive and decreasingly profitable in recent years, especially in the longline industry. Linking aspirations for indigenous participation and wealth generation only to vessel ownership, therefore, could be misguided. It might be better to

- give a range of tuna-related businesses equal weight with vessel ownership, such as service industries, marketing/trading and processing
- recognise that since most seafood trading and marketing occurs in centres such as Bangkok, Tokyo and Manila, consider sending trainees overseas for work experience, as well as tertiary education in business studies and training in Asian languages
- consider the employment of women as well as men in marketing, trading and processing.

To encourage trans-shipping and the accompanying service industries, wharf facilities in Suva need to be improved. The following measures would encourage the use of Suva as a major trans-shipping and service port and minimise adverse impacts

- survey vessel owners about what would affect their choice to use Suva for maintenance work and whether there are sufficient tradespeople available
- if adequate skilled labour is not available, consider an immigration scheme to import tradespeople in the short term and a training scheme to increase the supply of Fijian tradespeople in the medium term
- deal with the social impacts that come with a trans-shipment port by developing the particular kinds of health and welfare services needed to deal with STIs, gender-based violence, social dislocation of women involved in prostitution, substance abuse and physical and mental health care of fishing crews.

Fiji's large tourist industry has been helpful in creating conditions that facilitate tuna development. To nurture these synergies, consider the following

- having representatives from the tourism and fisheries sectors participate in decision making, for example, future upgrades in planes for tourists should take into consideration any potential impacts on cargo space when selecting planes
- collaborate on expanding training for food safety and hygiene, since the tourism industry also needs employees to be able to handle food safely.

Notes

- ¹ For further information on the Fijian economy, see 'Fiji' (ADB 2005a; ADB 2005b).
- ² SPC scientist Adam Langley said the drop in CPUE for albacore in 2003 was likely to have been caused by oceanographic effects, as the CPUE increased again in 2004 without a reduction in fishing mortality (Langley 2005).
- ³ As of 2005, China still did not have a 'Head Agreement' between governments in the Pacific; fishing access was negotiated between locally based agents and relevant Pacific island government authorities (McCoy and Gillett 2005).
- ⁴ For information on cost structures for the Chinese fleet, see McCoy and Gillett 2005.
- ⁵ According to Robert Gillett (pers. comm.), however, many of the Chinese vessels based in Suva have not reflagged as Fijian vessels.
- ⁶ In 2003, the number of licences reserved for indigenous Fijians was increased to 25 (plus 70 in the 'Open' category and 15 for processing companies). In 2004, the Cabinet revised the categories of licences to just two: 'Open' and 'Indigenous', to be apportioned in the ratio 54:46 (Turaganivalu, pers. comm.).
- ⁷ Available from <http://forum.europa.eu.int/irc/sanco/vets/info/data/listes/ffp.html>, accessed May 2006.
- ⁸ For further perspectives on the effects on women of economic development in Fiji, including from tuna industries, see Emberson-Bain 1994.