

Nutrition

Nordhoff (1930) writes that skipjack

is and has been for many centuries a fish of great importance to the Society Islanders; it is no exaggeration to call it the herring of the South Seas. Its flesh is rich, palatable, and nourishing and one can eat it with relish every day.

In the outer islands of Yap in Micronesia, according to Bates and Abbott (1954), “the number one food fish in terms of importance to the island is identified as skipjack tuna.” Still referring to skipjack, Kennedy (1930) says that in Tuvalu “the flesh is highly relished, both cooked and raw, and an abundance of bonito⁹ is usually a signal for communal feasting.” Zann (1980), writing half a century later, notes that skipjack and other tunas are still very much an important food item in Tuvalu: “Tuvaluans greatly enjoy eating fish and have a word, *miti*, to describe their craving for fish. Individual tastes vary, but bonito is usually the stated favourite.” Even on large fertile islands, tuna is important. Hulo (1980) reports that in the North Solomons Province of PNG, “tuna is a highly regarded food fish which is caught in large numbers.”

The previous section showed that tuna is an important component of the small-scale fisheries in the region. Virtually all the tuna caught in those fisheries is consumed within the Pacific Islands. In general, tuna is most important in the diet of countries made up of small, resource-poor islands.

Although tuna caught by the industrial fishing fleets is often thought not to enter the food supply of the Pacific Islands, there have always been important exceptions and the situation is now changing. Solomon Taiyo (1998) sells about 1,000 MT of frozen tuna in local markets in the Solomon Islands; 20 percent of the company’s canned tuna production at Noro is consumed domestically. In Fiji, the PAFCO cannery in Levuka sells about 11 percent of its production (equivalent to about 6 percent of the country’s total consumption of canned fish, according to Gillett [1994]) on the local market (Fiji

⁹ In some Pacific Islands “bonito” refers to skipjack.

Fisheries Division 1996); such sales brought in \$2 million in 1998 (Fiji Fisheries Division 1999). In PNG, domestic sales of canned tuna have stood at 20 MT per day since January 2000 (P. Celso, personal communication). "Leakage" of frozen tuna from industrial operations into the domestic food system has always been significant at canneries and, more recently, transshipment points. The emergence of medium-scale tuna longline operations in most Pacific Islands countries has resulted in the sale of damaged tuna, undersized tuna, and by-catch on the domestic markets.

Although detailed fish marketing studies have not been made in most Pacific Islands countries, such studies that do exist bring out the prominence of tuna. Crossland and Philipson (1992), for example, in a study of fish marketing in the Solomon Islands show:

- Local sales of frozen tuna reached between 400 MT and 500 MT per year in the late 1980s and early 1990s.
- Frozen fish from the industrial fishery make up for a large portion of shortfalls in the supply of fresh fish.
- Local sales of canned tuna increased from 19,628 cases in 1976 to 163,863 cases in 1990 (equivalent to 329 MT to 2,873 MT of whole fish).
- Of all meals covered by the survey, 11.3 percent had frozen bonito and 3.5 percent had frozen by-catch from the tuna fishery.

Elsewhere in the region:

- In FSM, says Heberer (1997), while the tuna longline by-catch sold to the public in population centers is not a major component of vessel revenue, it can be an important contribution to available protein at affordable prices. One tuna company based in Pohnpei reports local sales of tuna and by-catch averaging 100 MT per year (G. Russo, personal communication). Local sales to restaurants, institutions, and the general public by another large processor based in Pohnpei averaged 24 MT per year, or 60 MT whole weight (Appendix A).
- In Samoa, tuna is important in the diet and this importance is growing, following the recent expansion in tuna longline fishing. The domestic markets sell more than 200 MT of tuna annually (Samoa Fisheries Division 1999), the equivalent of

1.18 kg per capita. Actual consumption is larger because of the tuna distributed informally and leakage from the longline fishery.

- An operator of a fleet of longliners in Fiji states that he often sells more than 10 MT of tuna and by-catch (G. Southwick, personal communication). Sales of tuna to institutions such as schools and hospitals in Fiji are also reportedly increasing.
- In Tuvalu, 50 percent of all fish sold in Funafuti is tuna (S. Maluofenua, personal communication).
- The entire catch of Palau's lone pole/line vessel in operation is sold for local consumption.

With the large importance of tuna in the diet, interruptions in supplies can understandably produce difficulties. In Pohnpei, the almost constant availability of tuna sashimi provides an important enticement to diners at restaurants. When a cholera epidemic in the state in 2000 forced the Government to ban sales of sashimi, restaurant operators, under pressure from customers, asked the Government to reconsider the ban and it was eventually lifted with new health safeguards in place (Y. Suzuki, personal communication).

It is difficult to obtain quantitative information on tuna consumption across the region. Population information from SPC (1993), fisheries information from Dalzell and Adams (1994), and nutrition information from FAO (1995a) and GPA (1997) were used to construct Table 10.

The regional per capita consumption of fish, about 55 kg per year, is substantially higher than the world average of 13.32 kg (FAO 1995b). In fact, the recorded fish consumption of some countries in the region – Kiribati, Tokelau, Tuvalu, Palau – is among the highest in the world. When Table 10 is viewed in the context of the information on small-scale fisheries in the previous section, certain features become apparent. The most notable is that fish is an extremely important part of the diet of the average Pacific Islander and that tuna makes up a substantial portion of all fish consumed, especially in the most vulnerable countries in the region.

PNG, Kiribati, Tuvalu, Solomon Islands, Vanuatu, and Samoa are categorized as low-income food-deficit countries by FAO (1995). The fact that tuna is an important part of the diet in many of these countries attests to the important role of tuna in the food security of the region.

Also relevant to food security is the fact that tuna is often landed in quantities that exceed immediate requirements. In many island communities, especially those that are remote and lack electricity, the excess catch is smoked, baked, or dried and stored for use during periods of food scarcity.

**Table 10: Per Capita Fish Consumption, Early 1990s
(kg/year)**

Country	Per Capita Fish Consumption
Cook Islands	67.8
FSM	73.4
Fiji	41.8
Kiribati	181.6
Marshall Islands	61.3
Nauru	50.0
Niue	62.3
Palau	107.7
Papua New Guinea	16.9
Solomon Islands	44.8
Tokelau	129.4
Tonga	34.5
Tuvalu	113.0
Vanuatu	27.0
Samoa	31.8