

Kiribati

Employment

Because very few fishermen are registered with the Kiribati Provident Fund, there is little employment information on the fisheries sector (D. Abbott, pers. com.). Most of the indicative information is from the national census held in 1990 and in 1995.

The 1995 census (Statistics Office 1997) shows that:

- Of the 7,848 people who had “cash work,” 349 people (4.4%) had fisheries-related jobs—seaweed grower, coastal fisherman, deepsea fisherman, or other fisheries worker n.e.c.
- Of the 11,920 households in Kiribati, 64% practiced fishing in the ocean flat, 64% in the lagoon flat, 49% in the ocean, and 59% in the lagoon.
- The main source of cash income for 29% of the 11,920 households in Kiribati was fishing.
- The main source of cash income for 9% of the 11,920 households in Kiribati was seaweed cultivation.

Other employment information related to fisheries includes:

- ADB (1998a) states that almost all rural households and about 65% of urban households are engaged in fishing for subsistence purposes. About 1,100 household were engaged in seaweed production in 1996.
- Mees (1987) states that 40–55% of the weekly South Tarawa fish landings of 128 tons are made by full-time commercial fishermen.
- Tebano, T. and G. Paulay (1995) states that, in South Tarawa, 500 subsistence gatherers and 35 commercial divers collect 1,400 mt of the shellfish *Anadara*.
- Preston (2000) estimates fisheries employment in Kiribati in 1996 as 1,131 people employed in commercial harvesting and 20,000 people employed in subsistence fishing.
- Fisheries Division (1998) indicates 12% of the households in Kiribati do not fish. Of those that do fish, 17% fish commercially full time, 22% fish commercially part time, and 61% fish only for subsistence.

- Tinga (2000) states that artisanal fishing is carried out in South Tarawa by 200–300 motorized skiffs.
- Savins (2001) states that (i) there are over 200 boats presently active on Tarawa which employ 300 fishermen full time and 300 fishermen part time, and (ii) people engaged in domestic troll fishing make up 31% of private sector employment in Kiribati.
- B. Onorio (pers. com., August 2001) stated that there are presently no commercially operating pole-and-line or longline vessels based in Kiribati. Although purse seiner *Kao* is registered in Tarawa and has Kiribati crew, it fishes mainly in PNG waters.

Volumes and Values of Fish Harvests

Mees (1987) reports the total catch from Tarawa in 1987 as follows:

- The catch averages 128 mt per week.
- Of the total catch, 32.5% came from ocean fishing, 32.5% from collecting, 28.0% from lagoon fishing, and 7.0% from reef fishing.
- Full-time commercial fishermen are responsible for 40–45% of the catch.

Mees et al. (1988) estimate that the annual catch of all species in the Gilbert Group of Islands were 11,500 mt in the mid-1980s.

The population of Kiribati increased from 64,100 in 1985 to 90,700 in 2000 (Ryan and Stepanoff 2000). If fish catches reported by Mees et al. (1988) increased proportionally, the estimated total catch in 2000 would be 16,271 mt.

Tebano and Paulay (1995) estimate that, for one type of shellfish (*Anadara*) in one lagoon (Tarawa), the yearly catch is 1,400 mt broken down as follows: 9.0 kg per day from each of the estimated 500 subsistence gatherers, and 111.0 kg per day from each of the estimated 35 commercial divers. Some observers of the Tarawa fisheries situation feel that *Anadara* consumption has decreased somewhat in the past few years due to health concerns (M. Savins pers. com., September 2001).

Dalzell et al. (1996), using primarily the 1989 Fisheries Division Annual Report, give the following information on coastal fisheries production:

- Subsistence production of 9,084 mt valued at US\$13,373,667;
- Commercial production of 3,240 mt valued at US\$4,770,000.

The World Bank (2000) estimates the following subsistence production:

- Finfish production of 13,743 mt;
- Shellfish production of 412 mt;
- Total value of subsistence production of finfish and shellfish of US\$7.0 million for equivalent caloric value, US\$18 million for protein equivalent.

Tinga (2000) gives the results of artisanal surveys carried out in 1998 to 2000 on 15 islands in Kiribati:

- Weekly production by artisanal fishermen ranges from 0.5 mt to 20 mt per island, averaging 8 mt per island (equivalent to about 8,800 mt per year for all non-Tarawa islands of Kiribati);
- Weekly artisanal landings of tuna alone at Tarawa is estimated at 33 mt, or about 1,650 mt per year.

The above artisanal production equates to about 10,450 mt per year, excluding Tarawa's non-tuna commercial production.

An individual with long experience in fisheries in Kiribati (M. Savins pers. com., September 2001) provided thoughts on recent fish production and prices:

- Artisanal production. Fish production at the 17 outer islands is about 3 mt per week; production at Christmas Island is about 18 mt per week; and production of tuna at Tarawa is about 26 mt per week.

The above artisanal production equates to about 5,000 mt per year, including Tarawa's non-tuna commercial production.

- Subsistence production. It is estimated to be about twice the artisanal production for each island.
- Prices:

Tarawa finfish	– A\$2.40–A\$2.62 per kg, average price of A\$2.50 per kg
Tarawa <i>Anadara</i>	– A\$5.00 for a 20.0-kg bag; whole weight to food ratio of 5:1
Outer islands finfish	– A\$0.3–A\$0.60 per pound, average price of A\$1.00 per kg

B. Onorio (pers. com., August 2001) reports that the Kiribati-flagged purse seine vessel *Kao* is fishing mainly in PNG waters and does three to four trips per year.

Gillett et al. (2001) uses the SPC Catch and Effort Logsheet Database with adjustments to estimate the 1999 tuna catches in the Kiribati zone and catches by Kiribati-flagged vessels in other zones.

Table A2.21: Estimated Foreign Tuna Catches in the Kiribati EEZ, 1999

Fishing Nation	mt
United States of America	56,167
Taipei, China	38,826
Vanuatu	15,060
Korea, Republic of	10,512
Japan	10,199
Federated States of Micronesia	960
Solomon Islands	484
Papua New Guinea	183
Kiribati	0
Total	132,391

EEZ = exclusive economic zone; mt = metric ton.
 Source: Gillett et al. (2001).

Table A2.22: Estimated Catches by Kiribati-flagged Vessels in Other EEZs, 1999

EEZ	mt
Papua New Guinea	4,928
Federated States of Micronesia	250
Nauru	140
Solomon Islands	85
Palau	65
Kiribati	0
Total	5,468

EEZ = exclusive economic zone; mt = metric ton. Source: Gillett et al. (2001).

In summary, selectively using the above information and the knowledge of recent developments, a crude approximation of the Kiribati annual fisheries production in recent years is given below:

Table A2.23: Estimated Annual Fisheries Production of Kiribati, late 1990s

Fishing Sector	Volume (mt)	Value (A\$)
Coastal Subsistence	10,000	12,230,000
Coastal Commercial ^a	6,000	9,780,000
Offshore Locally-based	0	0
Offshore Foreign-based	132,000	205,000,000
Total	148,000	227,010,000

A\$ = Australian dollar; mt = metric ton.

^a Includes the value (but not volume) of aquarium fish.

Fishery Exports and Imports

Table A2.24: Estimated Annual Value of Fisheries Exports of Kiribati, 1995–1999 (A\$)

Export	1995	1996	1997	1998	1999
Fish (Fresh/Frozen)	266,000	211,000	110,000	105,000 ^a	200,000
Pet Fish	817,000	639,000	698,000	716,000	1,800,000
Shark Fins	659,000	194,000	94,000	129,000	300,000
Total Fish/Pet/Shark Exports	1,742,000	1,044,000	902,000	950,000	2,300,000
Total All Exports	10,030,000	6,817,000	8,432,000	9,410,000	13,600,000
Percentage of Fish/Pet/Shark Exports to All Exports (%)	17.4	15.2	10.7	10.1	16.9

A\$ = Australian dollar.

^a NEPO (1990) reports A\$1,047,000 for fish exports for 1998. However, unpublished information from the Statistics Office, Ministry of Finance and Economic Planning (June 2001) only reports A\$105,000. Sources: For 1995–1998 figures: NEPO (1999); For 1999 data: unpublished information, Statistics Office, Ministry of Finance and Economic Planning, June 2001.

Other information relevant to the export of fishery products includes:

- Fisheries Division (1994) states that “there is a high tendency for locals going abroad to take with them fish and other marine products destined for friends and relatives staying abroad. An estimated 11.5 mt of such “personal consignment” was recorded for 1994.
- Fisheries Division (1994) records an export of 139.3 mt of marine products for overseas markets. For the same year, NEPO (1999) records 262 mt of fish alone.
- ADB (1998a) states that fisheries exports peaked at A\$2.73 million in 1989 when exports of the government-owned Te Mautari Limited (TML) reached A\$2.6 million.

With respect to fishery product imports:

- The Overseas Fisheries Cooperation Foundation (OFCF) of Japan (1998) indicates that about 380 mt of seafood, worth about A\$572,840 was imported in 1995. The vast majority of this was canned fish, but A\$18,726 of dried fish from the Marshall Islands and Australia was also imported.
- ADB (1998a) gives total of all Kiribati imports for 1995 as A\$47,547,000; and the total for food imports as A\$15,407,000.
- The Integrated Marine Management Limited (IMM 1993) states that imports of canned fish are about 270 mt per year.
- Nube (1989) gives the Kiribati canned fish imports from 1974 to 1986, which range from 112 mt to 312 mt per year.
- Coyne et al. (1984) state that in the period 1978–1979, 3.2 kg of canned fish per capita was imported.

Access Fees

According to unpublished information from the Statistics Office (June 2001), the Kiribati Government received the following “fish license revenue:”

Government expenditures in 1999 were approximately A\$94.0 million. In recent years, the Kiribati GNP has been about 1.5 to 2.0 times the GDP due to fishing license fees, external assets, and Seamen’s remittances.

Table A2. 25: Estimated Annual Fishing License Revenue of Kiribati, 1996–2000 (A\$)

Item	1996	1997	1998	1999	2000
Fishing License Revenue	6,234,000	29,434,000	40,322,000	31,930,000	31,159,000

A\$ = Australian dollar.
Source: Statistics Office (2001).

Levels of Marine Resource Consumption

The various studies on fish consumption in Kiribati give the following results:

- Fisheries Division (1978) estimates that 335,936 cans of fish are purchased in South Tarawa annually. The annual fresh fish consumption for the 14,824 residents of South Tarawa was estimated to be 113.0 kg per capita.
- Coyne et al. (1984) state that in the period 1978–1979, 3.2 kg of fish per capita was imported.
- Nube (1989) reports that the Kiribati canned fish imports for 1974–1986 range from 112–312 mt per year. Using information from the 1985 census, he estimated daily per capita fish consumption for the 18 islands in the Gilbert and Line groups to range from 0.45 kg in South Tarawa to 2.86 kg in Arorae. Of the 18 islands listed, 11 (61%) of the islands have a per capita consumption of fish greater than 1 kg per day.
- World Bank (1995), quoting FAO sources, stated that “Per capita supplies [of fish] available for consumption are consequently quite high ranging between 72 and 75 kilograms per year over the last decade.”
- World Bank (2000) recounts that in Kiribati 67% of total animal protein is from seafood.
- According to IMM (1993), the estimated catch in the Gilbert Group of Islands translates to a fish annual supply of 207.0 kg per capita.
- Using 1995 FAO production, import, and export data, Preston (2000) calculates that the annual per capita supply of seafood is 150.0 kg.

Considering (i) the Kiribati population of 90,700 in 2000 (Ryan and Stepanoff 2000), (ii) the local fishery production of 16,000 mt (Table A2.23), (iii) fish exports of about 60 mt in the late 1990s (NEPO 1999), (iv) canned fish imports of about 380 mt annually (OFCF 1998) equivalent in food value to about 760 mt of whole fish, it appears that the annual per capita fish consumption in Kiribati in the late 1990s is about 185.0 kg.

Exchange Rates

Australian dollar (A\$) to the US dollar (US\$) as per ADB average-of-period rate:

1995	–	1.3490
1996	–	1.2779
1997	–	1.3474
1998	–	1.5918
1999	–	1.5500
2000	–	1.7250

