

Papua New Guinea

Employment

NSO (1994) contains information relevant to fisheries employment:

- In 1990, the percentage of wage earners to total citizen population was 9.2%.
- For economic activity classification, the census combined farming and fishing in two categories: "Farming/fishing, for food and money" and "Farming/fishing, subsistence only." Thus, the census gives little information specifically on fishing. Similarly, the census gives information on occupations of the urban population under the category "Skilled agricultural and fishery workers."
- Out of 130,963 citizen rural households, about 23% were engaged in catching fish. Of this, about 60% caught fish for own consumption only and 40% caught fish for both own consumption and for selling.

UNDP (1994) has some fisheries-related employment information:

- PNG has about 2,000 coastal villages and a rural coastal population of about 500,000 people.
- The coastal fishing population, defined as those who are involved in some fishing activity at least once per week, totals about 120,000.
- The number of part-time artisanal fishers is between 2,000 and 4,000.

Gillett et al. (2001) estimate tuna-related employment in 2000 as follows:

Cannery:	2,500	people
Loining plant:	15	
Local longliners:	340	
Local purse seiners:	75	
Processing/export:	60	
On-board transshipment:	25	

There appears to be a lack of employment information on the non-tuna commercial fishing operations, such as the fishing for prawns, lobster, barramundi, shark, and aquarium fish.

Volumes and Values of Fish Harvests

Information on the production from coastal subsistence fishing in PNG includes:

- Dalzell et al. (1996), using information from the late 1980s and early 1990s, estimate that PNG's subsistence fisheries annually take 20,588 mt worth US\$41,176,000.
- If the above Dalzell estimate is increased proportionately to population growth, the present production would be about 27,000 mt.
- Preston (1996a), citing several sources, concludes PNG's subsistence fisheries annually take 26,000 mt.
- ANZDEC (1995) assumes the subsistence catch to be worth K1.00 per kg.
- The Acting Director of the National Fisheries Authority (NFA) of PNG indicated that about 26,000 mt of fisheries products, worth from K1.00 to K4.00 per kg is harvested annually by the subsistence fisheries (Batty, pers. com., July 2001).

Information on the production from coastal commercial fishing¹⁰ in PNG includes:

- Dalzell et al. (1996), using information from the late 1980s and early 1990s, estimate that PNG's coastal commercial fisheries annually take 4,966 mt, worth US\$22,096,908.
- Preston (1996a) states that the annual commercial fisheries production in the mid-1990s was about 4,800 mt, worth K16.4 million.
- NFA (1996) indicates that the coastal fishery exports were about K20.8 million in 1995.

Information on the production from the locally-based offshore fisheries in PNG includes:

¹⁰ In this paper, the category includes the prawn and lobster fisheries.

Table A2.37: Estimated Annual Domestic Tuna Catches in PNG by Fishing Method, 1997–1999 (mt)

Fishing Method	1997	1998	1999
Purse Seine	9,286	30,551	25,800
Longline	547	358	650 ^a

mt = metric ton; PNG = Papua New Guinea.

^a Incomplete data.

Source: Kumoru and Polon (2000).

- Kumoru (2001) later updated the 1999 domestic purse seine catch as 26,798 mt.

Table A2.38: Estimated Annual Total Tuna Catches in PNG by Fishing Method, 1997–2000 (mt)

Fishing Method	1997	1998	1999	2000
Purse Seine				
(domestic and foreign)	154,549	128,372	99,984	108,154
Longline	568	393	329	199

mt = metric ton; PNG = Papua New Guinea.

Source: National Fisheries Authority of Papua New Guinea (2001a).

- Gillett et al. (2001), using the SPC Catch and Effort Logsheet Database with adjustments, give the total PNG tuna catch in 1999 as follows:

Table A2.39: Estimated Total Tuna Catch in the PNG EEZ, 1999

Fishing Nation	mt
PNG	49,666
Taipei, China	38,660
United States of America	21,475
Philippines	15,178
Kiribati	4,928
Vanuatu	3,730
Federated States of Micronesia	3,148
Korea, Rep. of	887
Solomon Islands	90
Japan	20
Total	137,782

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

In summary, selectively using the above information and the knowledge of recent developments, a crude approximation of the PNG annual marine fisheries production¹¹ in recent years is given below:

Table A2.40: Estimated Annual Marine Fisheries Production of PNG, late 1990s

Fishing Sector	Volume (mt)	Value (K)
Coastal Subsistence	26,000	52,000,000
Coastal Commercial	5,500	55,000,000
Offshore Locally-based	50,500	114,000,000
Offshore Foreign-based	85,000	193,000,000
Total	167,000	414,000,000

K = kina; mt = metric ton; PNG = Papua New Guinea.

¹¹ As the scope of this study is limited to marine resources, freshwater fish catches (estimated by various sources as between 8,000 mt and 13,500 mt per year) are not included.

Fishery Exports and Imports

NFA (2001a) estimates the total exports of marine products as:

Table A2.41: Estimated Annual Total Exports of Marine Products in PNG, 1996–2000

Exports	1996	1997	1998	1999	2000
Volume (mt)	4,476	7,756	39,013	39,896	41,555
Value (US\$)	19,357,615	24,496,044	64,366,729	48,106,666	53,565,923
Value (K)	25,482,050	36,680,018	136,251,074	125,907,747	146,041,687

K = kina; mt = metric ton; PNG = Papua New Guinea; US\$ = United States dollar.

Source: National Fisheries Authority of Papua New Guinea (2001a).

ADB website reports the total exports of PNG as US\$2,639,600,000 in 1999.

NFA (2001b) gives the total annual exports of fish and marine products as:

- 1998 – 38,989 mt valued at K136,754,997 or US\$64,610,172
- 1999 – 32,527 mt valued at K110,173,972 or US\$42,369,824

Kumoru and Polon (2000) report the following *tuna* exports:

Table A2.42: Estimated Annual Tuna Exports of PNG, 1998–1999 (mt)

Tuna Exports	1998	1999
Canned	4,822	6,710
Fish Meal	746	260
Chilled	590	655
Frozen	29,518	28,572

mt = metric ton; PNG = Papua New Guinea.

Source: Kumoru and Polon (2000).

The Acting Director of NFA (Batty, pers. com., August 2001) indicates that about 1,200 mt of tuna were exported by airfreight in 2000.

Lightfoot (2000) estimates the longline exports (tuna and other species) in 1998 as 1,583 mt, worth about US\$3.6 million.

Preston (1996a) states that about 4% by weight of the domestic fisheries production are exported, but this accounts for 25% of the production by value.

ANZDEC (1995) indicates that most of PNG's imported fish (about 95% by volume) is canned fish, principally mackerel. The remainder is frozen fish used in the domestic fast-food business and partly whole mackerel for cannery supply.

Coyne et al. (1984) state that PNG imported 6.1 kg of fish per capita in the 1970s.

NFA (1996) reports that 56,000 mt of canned fish and fillets were imported in 1990.

Preston (2000), using FAO data, estimates that 35,539 mt of fishery products worth US\$43.6 million were imported in 1996.

According to unprocessed data from Customs, 13,473 mt of fishery products were imported in 1998.

Access Fees

NFA (2001b) states that K22,179,578 was received in license fees in 1999. The Acting Director of NFA (Batty, pers. com., August 2001) reveals, however, that the revenue was only about K15 million (US\$5.84 million).

McCoy (1998), in a study of purse seine fishing in PNG, relays that the most recent annual access fees paid (presumably for 1997) were US\$16.4 million.

Levels of Marine Resource Consumption

UNDP (1989) estimates the total consumption of fish (from imported, inland, and coastal sources) by the PNG population in 1988 was approximately 16,350 mt, or roughly about 4.8 kg per capita.

Department of Fisheries and Marine Resources (DFMR 1993) calculates the domestic consumption of fishery products to be about 20.0 kg per capita in 1989.

NFA (1995) assesses that the consumption of fish products in PNG reached approximately 71,000 mt per year, equivalent to about 18.9 kg per capita.

Preston (2000), using FAO imports and exports data, estimates annual fish consumption to be 18.2 kg per capita.

Kumoru (2001) states that about 6,000 mt of tuna is canned annually in PNG for domestic consumption.

Using domestically produced fish consumption information in Preston (1996a), per capita canned fish consumption in FAO (1996), and PNG population figures in NSO (1994), total annual fishery product consumption appeared to be about 24.9 kg per capita in the mid-1990s.

Exchange Rates

PNG kina (K) to the US dollar (US\$) as per ADB average-of-period rate:

1995	–	1.2798
1996	–	1.3191
1997	–	1.4380
1998	–	2.0736
1999	–	2.5708
2000	–	2.7822

