

## Vanuatu

### *Employment*

Fisheries employment information is not readily available in Vanuatu. Most data quoted in recent reviews of the fisheries sector are from the 1993 National Agriculture Census (Statistics Office 1994). The report of the census includes the following fisheries-relevant employment information:

- About 35% of the 22,000 rural households in Vanuatu were engaged in fishing during the 7 days period prior to the census.
- Of the fishing households above, 40% reported selling fish for some form of income.
- About 19% of rural households collect trochus shell.

ADB (1997), citing the 1989 census, indicates that of the total population of 79,669 aged 15 and over, there were about 66,957 "economically active" people. Of these, 49,810 people were involved in the industry of "Agriculture, hunting, forestry, and fishing." Approximately 45,564 people had occupation as "skilled agriculture and fishery worker." No further disaggregation is available.

### *Volumes and Values of Fish Harvests*

Information on the production of small-scale fisheries includes:

- Statistics Office (1994) states that the 1983 agriculture census estimated that the production of the "village fishing sector" was 2,403 mt per year.
- David and Cillaurren (1992) states that in 1984 the total production for "small-scale unstructured village fishing" amounted to 3,674.5 mt (95% confidence interval: 2,637–4,885 tons).
- If this 3,674.5 mt were increased proportional to the population growth between that period and the present, the present production would be about 5,600 mt.
- World Bank (1995) states that production from "semi-subsistence" operations was estimated at 3,100 mt in 1992.
- Dalzell et al. (1996), using reference material from the late 1980s and early 1990s, estimate that the annual production from the

subsistence fisheries was 2,045 mt worth US\$1,953,360, and the production from the commercial fisheries was 467 mt worth US\$1,514,364.

- Preston (1996b) estimates the coastal commercial production of the bottomfish fishery for each year during the period 1983–1994. In the 1990s, an average of 110 mt per year is calculated.
- Wright (2000) comments on subsistence fisheries: “If 1994 estimates for the size of the subsistence harvest in Vanuatu are reasonable, and the population has grown in line with forecasts, the size of the subsistence harvest in 2000 will be approximately 2,400 tonnes.” Even if this estimate is off by 20%, it still represents a major fishery, in terms of national food security, and provides significant relief in terms of demands for protein substitutes, many of which would be imported.
- Wright (2000) comments on small-scale commercial fishing:
  - (i) Deepwater snapper fisheries provide 80 tons annually to domestic markets, with relatively minor amounts exported. These domestic markets absorb an additional 40 tons of shallow water reef fish and coastal pelagics each year. On the basis that coastal fishermen receive an average price of Vt400 per kg for these fish, the value of these small fisheries to coastal populations throughout the country probably exceeds Vt48 million annually.
  - (ii) On the assumption that collectors of trochus receive an average of Vt250 per kg for the raw shell and that an average of 100 tons of shell has been harvested annually in each of the last 14 years, coastal communities have received an injection of approximately Vt25 million annually from the trochus fishery alone.
  - (iii) It is estimated that other smaller fisheries, principally beche-de-mer, and to a lesser extent aquarium life, green snail and crustacean fisheries, contribute at least an additional Vt15 million to local economies annually, albeit on a more localized scale.
- World Bank (2000) estimates that in 2000 Vanuatu’s subsistence fisheries produced 2,428 mt of finfish and 269 mt of shellfish.

The value of these fisheries was calculated to be US\$8.9 million in caloric equivalent or US\$14.7 million in protein equivalent.

- Fisheries Department (2001) states that the catch by commercial bottomfish boats in 2000 was 34.3 mt, worth Vt21 million.

Local fish prices given in various references include:

- Dalzell et al. (1996), using reference material from the late 1980s and early 1990s, use a value of US\$0.96 per kg for subsistence fisheries and US\$3.24 per kg for the commercial fisheries.
- Anonymous (1997) details the purchases made by a commercial company in several provinces and concludes that an average of Vt312 per kg was paid for the fish, shellfish, and other fishery products purchased.
- Fisheries Department (2000) used an average of Vt320 per kg of fish production to value the production in 1999 of 77 active rural fishing projects.
- Wright (2000) assumes that coastal fishermen receive an average price of Vt400 per kg for market fish.
- Fisheries Department (2001) estimate a value of Vt616 per kg for the 34.3 mt of bottomfish landed by the nine locally-based commercial bottomfish vessels in 2000.

Information on offshore fishing includes:

- Nichols (1996) states that the domestic fishing fleet is limited to two small longliners, which undertake both pelagic and bottom-set longlining for deepwater bottom fish. Other longliners are chartered by two local joint ventures, but these vessels do not base their operations in Vanuatu.
- Anonymous (2000b) states that since December 1997 no locally-based commercial tuna fishing has taken place.
- Fisheries Department (2000, 2001) indicates that four locally-based fishing vessels above 10 meters were licensed in 1999 and nine in 2000. These vessels targeted bottomfish and therefore should not be considered "offshore" vessels.
- Gillett et al. (2001), using the SPC Catch and Effort Logsheet Database with adjustments, give the following tuna catches in the Vanuatu zone:

**Table A2.63: Estimated Foreign Tuna Catches in the Vanuatu EEZ, 1999**

Fishing Nation	mt
Fiji Islands	65
Taipei, China	53
United States of America	0
Vanuatu	0
<b>Total</b>	<b>118</b>

EEZ = exclusive economic zone; mt = metric ton.

In summary, selectively using the above information and the knowledge of current developments, a crude approximation of the Vanuatu annual fisheries production in recent years is presented in Table A2.64:

**Table A2.64: Estimated Annual Fisheries Production of Vanuatu, late 1990s**

Fishing Sector	Volume (mt)	Value (Vt)
Coastal Subsistence	2,700	513,000,000
Coastal Commercial	230	88,000,000
Offshore Locally-based	0	0
Offshore Foreign-based	118	32,666,000
<b>Total</b>	<b>3,048</b>	<b>633,666,000</b>

mt = metric ton; Vt = vatu.

*Fishery Exports and Imports*

Fisheries Department (2001) gives the marine products exports for 2000 in Table A2.65 below.

For earlier years, Wright (2000) indicates that during the 1990s the annual total of all marine exports was about Vt60 million per year.

**Table A2.65: Estimated Marine Products Exports of Vanuatu, 2000**

Export	Quantity	Value (Vt)
Live Aquarium Fish	8,368 pieces	2,102,931
'Cultured' Coral	275 pieces	161,935
Fresh Poulet	1,193 kg	479,805
Live Rock	13,710 pieces	3,451,648
Live <i>Tridacna Crocea</i>	113,940 pieces	8,511,804
Live <i>Tridacna Maxima</i>	4,825 pieces	901,415
Live <i>Tridacna Squamosa</i>	1,420 pieces	741,148
Processed Beche-de-mer	20,925 kg	3,983,743
Processed Trochus Scraps	42,500 kg	8,846,655
Rock Lobster	975 kg	1,844,700
Semi-processed Trochus Button Blanks	28,690 kg	22,135,750
Shark Fins	30 kg	300,000
Shark Teeth	900 kg	900,000
<b>Total</b>		<b>54,361,534</b>

kg = kilogram; Vt = vatu.

Source: Fisheries Department (2001).

Information on imports of marine products is given in Fisheries Department (2000, 2001). These data are presented below:

**Table A2.66: Estimated Marine Products Imports of Vanuatu, 1999–2000**

Imports in 1999	Quantity
Mullet	1,000.00 kg
Freshwater Prawns	673.00 kg
King Prawns	250.00 kg
Aquarium Live Fish	291.00 pcs
Various Seafood	370.00 kg
Imports in 2000	Quantity
Prawns (fresh, frozen)	80 kg
Mullet (frozen)	8,020 kg
Live Ornamental Fish (fresh water)	44 pcs
Mussels and Paua (frozen)	15 kg
Reef Fish (fresh)	5 kg
Salted Cod Rod	2 kg
Smoked Cod	5 kg
Billfish Ovaries (frozen)	15 kg
Gracillaria (live specimens)	15 kg

kg = kilogram; pcs = pieces

Source: Fisheries Department (2000; 2001).

The above totals apparently do not include the import of canned fish.

World Bank (1995) estimated that the total value of all fishery products imported in 1993 was US\$735,000.

Preston (2000), using 1995 FAO trade data, indicates that 1,316 mt of fishery products were imported in 1995.

Coyne et al. (1984) estimate the annual per capita import of fish (of which the vast majority was canned fish) to be 14.8 kg in the period 1972–1976.

ADB website indicates the total exports of the country were US\$88.3 million in 1999.

### *Access Fees*

Fisheries Department (2000) states that, in 1999, the Department licensed a total of 14 foreign fishing vessels, which were mainly Taipei, China long-liners. A total of US\$70,000 was collected as government revenue from licenses at US\$5,000 per vessel per year.

It is estimated that Vanuatu received payments of US\$148,448 for access by vessels from the United States under the multilateral treaty.

### *Levels of Marine Resource Consumption*

Preston (1996b) estimates annual per capita fish supply from coastal fisheries in Vanuatu as 15.9 kg.

Coyne et al. (1984) estimate the per capita import of fish as 14.8 kg per capita in the period 1972 to 1976.

Preston (2000), using 1995 FAO data and considering production, imports, and exports, estimates the annual per capita supply as 21.0 kg.

Considering (i) the Vanuatu population of 199,800 in 2000; (ii) subsistence and commercial production of 2,930 mt; (iii) exports of about 100 mt of the subsistence and commercial production; and (iv) fishery imports of about 1,300 mt<sup>19</sup>, the annual per capita consumption of fishery products in 2000 would appear to be about 25.7 kg.

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<sup>19</sup> It is unknown what portion of this is canned, which would result in a higher whole weight equivalent.

*Exchange Rates*

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

1995	–	112.11
1996	–	111.72
1997	–	115.87
1998	–	127.52
1999	–	129.07
2000	–	137.64

