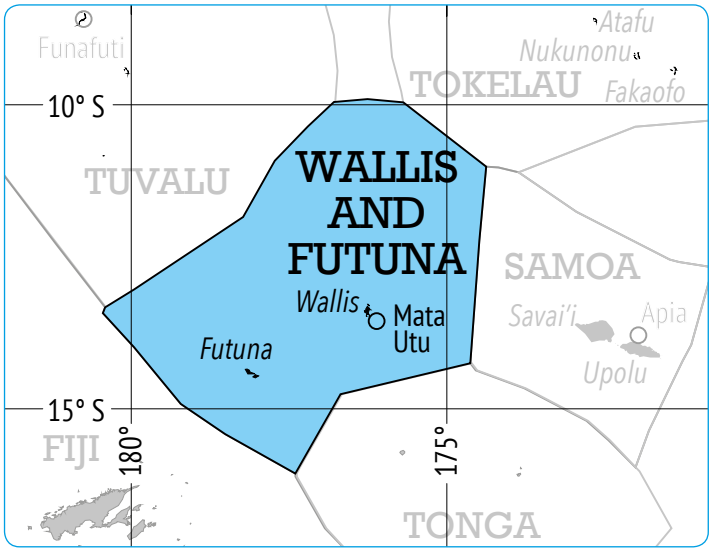
27 Wallis and Futuna[1]



27.1 Volumes and Values of Fish Harvests in Wallis and Futuna

Coastal Commercial Catches in Wallis and Futuna

There have been a number of historical attempts to review coastal fisheries in Wallis and Futuna. These include the following:

- Dalzell et al. (1996) used information from a 1994 report on the Wallis and Futuna economy and discussions with a fisheries officer to estimate a coastal commercial production of 296 mt (worth US$2,316,729) and a coastal subsistence production of 621 mt (worth US$3,105,360).
- A detailed inventory of fishers, fishing gear, and fishing practices of Wallis and Futuna was undertaken in 2001 (Fourmy 2002), but no catch estimates were made.

1 The French version of this chapter appears in Appendix 6, page 615 / *La version française de ce chapitre se trouve page 615 (Appendix 6).*

- Gillett (2009) considered several types of information related to coastal fisheries in Wallis and Futuna, including the Dalzell et al. (1996) estimate, a household income and expenditure survey carried out in Wallis and Futuna between June 2005 and May 2006, involving 1,025 households (Buffiere 2006), and fishery exports. The study concluded that in 2007 the production from coastal commercial fisheries in Wallis and Futuna was 121 mt, which was worth XPF (Pacific Franc Exchange) 105 million.

In 2014 an agriculture survey was carried out in Wallis and Futuna (Sourd and Mailagi 2015). Although that work focused on agriculture, it also contained some fisheries information. The results that have some bearing on annual fish catches include the following:

- In comparing the results to an earlier survey, the number of boats in Futuna was reduced from 56 in 2001 to 36 in 2014. The number of boats in Wallis was reduced from 252 in 2001 to 143 in 2014. Overall, there was a 42% decrease in the number of boats in the territory during the 13-year period.
- Of the 658 interviewed households that are involved with fishing, 179 fish from boats they own, 99 fish from boats they do not own, and 380 fish without a boat.
- Of the 658 interviewed households that are involved with fishing, the primary catches are lagoon fish (361 households), pelagic fish (241), crustaceans (30), and other shellfish (26).
- Of the fishing households that sell fish, 59% sell their catch for an average price of between 900 and 1,000 XPF per kg. 32% sell for less than this amount and 9% sell for more.
- Table 27-1 gives information on the disposal of the catch.

Table 27-1: Disposal of the Catch by Fishing Method

Type of fishing	Number households doing this fishing	Traditionnal exchange		Own household		Sale	
		Yes	No	Yes	No	Yes	No
Trolling	140	67	73	137	3	68	72
Deep slope fishing	49	29	20	47	2	32	17
Handline fishing	169	81	88	169	-	57	112
Net fishing	327	119	208	321	6	76	251
Spearfishing	287	112	175	281	6	114	173
Shell collecting	129	43	86	128	1	36	93
Lobster/crab diving	104	39	65	102	2	43	61
Other kinds of fishing	74	21	53	72	2	8	66

Source : Sourd et Mailagi (2015)

An official of the Bureau de la pêche et de l'aquaculture (B. Mugneret, per. com. November 2015) indicated the following:

- Although Cyclone Evan in late 2012 resulted in considerable destruction of crops, few boats were damaged. As a result, there was a subsequent increase in fisheries production to maintain food supplies.
- The number of operational fish aggregation devices (about 3 or 4 in the territory) has remained relatively constant over the last decade.
- There was a spurt of commercial fishing in 2013 before and during the Pacific Island Mini-Games.
- There were no exports of trochus or beche-de-mer in 2014. The only substantial fisheries export in that year was shell necklaces.

The following information may be relevant for estimating coastal fishing production:

- The population of Wallis and Futuna decreased by 14.9% between 2007 and 2014 (the focus years of the Gillett (2009) survey and the present study, respectively). (SPC PRISM website data).
- Kronen et al. (2008) cite various authors who have commented on overfishing in the Wallis lagoon, from the early 1930s. Overfishing in the past has mainly been attributed to the use of destructive fishing methods (especially explosives and a range of poisons) and the use of small-mesh gillnets.
- Bell at al. (2008), using household survey information, estimate that 86% of the coastal fisheries production of Wallis and Futuna is for subsistence purposes, and 14% is for sale. The paper also indicates that the estimated annual fisheries production, based on coral reef area, is 150 mt.

Following from the above, it is assumed that, since the Gillett (2009) estimate, there has been a slight decrease in total production (as evidenced by the decrease in the number of boats, the decrease in the population, and some over-exploitation), as well as a slight increase in commercialisation due to the evolution of the economy. Coastal commercial fisheries production in 2014 is estimated to be 150 mt, worth XPF 150 million.

Coastal Subsistence Catches

Following the logic presented above, the 2014 Wallis and Futuna coastal subsistence catch is estimated to have been 675 mt. Using the farm gate method for valuing subsistence production, this production is worth XPF 641,250,000.

Locally Based Offshore Catches

Although there is some trolling from small boats outside the reef for tuna and other pelagics, this is considered to be coastal fishing for the purpose of the present study. There is no locally based offshore fishing fleet in Wallis and Futuna.

Foreign-Based Offshore Catches

There is currently no authorised foreign fishing in the Wallis and Futuna zone. The last foreign fishing activity occurred in 1999 (Service de la Pêche et de l'Aquaculture 2007).

Freshwater Catches

There are no freshwater fisheries in Wallis and Futuna. Tilapia has been introduced into freshwater bodies on Wallis (Hinds 1969), but it is not considered a food fish.

Aquaculture Production

Although there have been some recent aquaculture trials on Wallis (e.g. Macrobrachium, Nandlal 2005), there is currently no aquaculture production in the territory.

Summary of Harvests

A crude approximation of the annual volumes and values of the fisheries and aquaculture production in Wallis and Futuna in 2014 is given in Table 27-2.

Table 27-2: Annual Fisheries and Aquaculture Harvest in Wallis and Futuna, 2014

Harvest Sector	Volume (mt)	Value (XPF)
Coastal Commercial	150	150,000,000
Coastal Subsistence	675	641,250,000
Offshore Locally based	0	0
Offshore Foreign-based	0	0
Freshwater	0	0
Aquaculture	0	0
Total	**825**	**791,250,000**

Figures 27-1 and 27-2 show the volumes and values of the 2014 Wallis and Futuna fisheries production. Aquaculture is not shown on the volumes figure, due to the use of mixed units (pieces and mt).

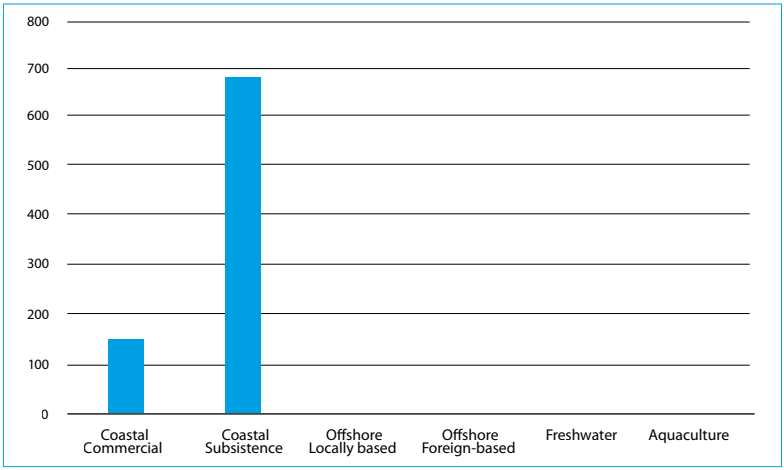


Figure 27-1: Wallis and Futuna Fisheries Production 2014 by Volume (mt)

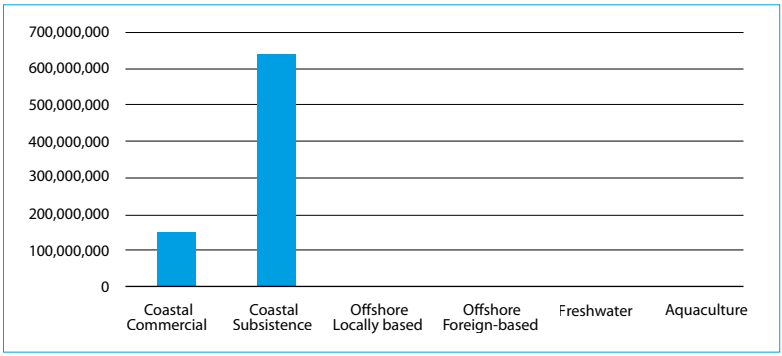


Figure 27-2: Wallis and Futuna Fisheries Production 2014 by Value (XPF)

Past Estimates of Fishery Production Levels by the Benefish Studies

Similar studies of the benefits to Pacific Island countries and territories from fisheries ("Benefish" studies) have been carried out in the past. Gillett and Lightfoot (2001) focused on 1999, Gillett (2009) focused on 2007, and the present study focuses on 2014. The fishery production levels for Wallis and Futuna from those three studies are given in Table 27-3.[2]

2 The earliest Benefish Study, Gillett and Lightfoot (2001), did not include aquaculture, freshwater fisheries or the non-independent territories.

Table 27-3: Estimates by the Benefish Studies of Annual Fisheries/Aquaculture Harvests

Harvest Sector	Year	Volume (tonnes et pièces)	Nominal Value (CFP)
Coastal Commercial	1999	n/a	n/a
	2007	121	105,000,000
	2014	150	150,000,000
Coastal Subsistence	1999	n/a	n/a
	2007	840	551,000,000
	2014	675	641,250,000
Offshore Locally based	1999	n/a	n/a
	2007	0	0
	2014	0	0
Offshore Foreign-based	1999	n/a	n/a
	2007	0	0
	2014	0	0
Freshwater	1999	s/o	s/o
	2007	0	0
	2014	0	0
Aquaculture	1999	n/a	n/a
	2007	0	0
	2014	0	0

Source: The present study, Gillett (2009), Gillett and Lightfoot (2001)

27.2 Contribution of Fishing to GDP

Current Official Contribution

2005 is the latest year for which the Wallis and Futuna GDP has been estimated. IEOM (2015) states that there is no entity in the territory with responsibility for GDP calculations. In 2008 the French CEROM programme evaluated the Wallis and Futuna economy using "rapid accounting techniques", and established a GDP of XPF 18 billion for 2005. This equates to a GDP per capita of XPF 1.2 million.

Method Used to Calculate the Official Fishing Contribution to GDP

Information about the method used to calculate the contribution of fishing to GDP is not readily available. Existing documentation and staff currently employed at the Wallis offices of the Institute d'Emission d'Outre-Mer and the Service Territorial de la Statistique are unaware of how the GDP estimate was made.

Estimate of Fishing Contribution to GDP

Table 27-4, below, represents one option for estimating fishing contribution to GDP in Wallis and Futuna. It is a simplistic production approach that takes the values of five types of fishing/aquaculture activities, for which production values were determined in the sections above (summarised in Table 27-2), and determines the value added by using value added ratios that are characteristic for the type of fishing concerned. Those VARs were determined by knowledge of the fisheries sector and through the use of specialised studies (Appendix 3).

Table 27-4: Fishing Contribution to the Wallis and Futuna GDP in 2014

Harvest Sector	Gross Value of Production (XPF, from 27-3)	VAR	Value Added (XPF)
Coastal Commercial	150,000,000	0.65	97,500,000
Coastal Subsistence	641,250,000	0.80	513,000,000
Offshore Locally based	0	0	0
Freshwater	0	0	0
Aquaculture	0	0	0
Total (XPF)			**610,500,000**

It is not possible to determine the percentage of the GDP of Wallis and Futuna that this XPF 610.5 million represents – the above table is for 2014, while the latest year for which the GDP has been calculated is 2005. The Gillett (2009) study stated that the contribution of fishing to GDP in 2007 estimated in the study (XPF 50 million) represented 2.8% of the GDP of Wallis and Futuna in 2005.

27.3 Exports of Fishery Production

In recent years trochus, beche-de-mer, and artisanal handicrafts have been the main exports of Wallis and Futuna. The available information shows:

- There were no exports of trochus or beche-de-mer in 2014. About 2.7 mt of beche-de-mer was exported in 2013 (B. Mugneret, per. com. November 2015).
- The only substantial fisheries export in 2014 appears to have been shell necklaces bought by departing passengers, with an estimated annual FOB value of XPF 10 million.
- IEOM (2015) indicates that the total value of all exports from Wallis and Futuna in 2014 was XPF 21.5 million, with marine products and handicrafts the only exports.
- The latest detailed exports statistics available from the Service Territorial de la Statistique are for the year 2011, when 1.078 mt of beche-de-mer (with a declared value of XPF 348,050) and 17 mt of trochus (with a declared value of XPF 5,100,00) were exported.

27.4 Government Revenue from Fisheries

Access Fees for Foreign Fishing

Since 1999 there have been no access agreements with foreign fishing fleets (Service de la Pêche et de l'Aquaculture, 2007). Consequently, no access fees for foreign fishing have been received since that time.

Other Government Revenue from Fisheries

In Wallis and Futuna the fishing sector is not revenue generating, but rather is subsidy absorbing. Subsidies are available for the purchase of a fishing vessel (reported to be up to 60% of construction costs) and fuel for its operation (up to 60%). Sea safety equipment is tax free. (B. Mugneret, per. com. November 2015)

27.5 Fisheries-Related Employment

IEOM (2015) estimates that there are about 40 professional fishers in Wallis and Futuna (i.e. full-time commercial fishers), with around 20 boats, which are mostly between 6 and 10 metres in length. It is also estimated that one in three households engages in some kind of fishing.

A recent survey (Sourd and Mailagi 2015) studied participation in fishing. The results are presented in Table 27-5.

Table 27-5: Participation in Fishing in Wallis and Futuna

Geographic area of residence	Participate in fishing?		Percentage participation
	Yes	No	
Alo	170	237	41,8 %
Sigave	93	169	35,5 %
Total Futuna	**263**	**406**	**39,3 %**
Hahake	82	429	16,0 %
Hihifo	126	190	39,9 %
Mua	187	369	33,6 %
Total Wallis	**395**	**988**	**28,6 %**
Total Wallis and Futuna	**658**	**1 394**	**32,1 %**

Source : Sourd et Mailagi (2015)

SPC (1999) discusses the different gender roles in fishing on Wallis and on Futuna. On Futuna men do fish, however women provide most of the daily seafood. The island of Wallis is relatively flat compared to Futuna, and gardens do not have to be made in difficult terrain so far away from the villages, hence garden work is not as demanding on Wallis and so women do much of that work. Accordingly, the women of Wallis are not involved in fishing to the same extent as Futunan women are.

SPC (2013) indicates that, across Wallis and Futuna, just over half of all fishers are men.

27.6 Levels of Fishery Resource Consumption

Gillett and Preston (1997) considered fishery production in Wallis and Futuna, along with the territory's fishery imports/exports, to estimate an annual per capita fish supply of 66.9 kg for the period of the early 1990s.

Bell et al. (2009) use information from household income and expenditure surveys conducted between 2001 and 2006 to estimate patterns of fish consumption in Pacific Island countries. The HIES were designed to enumerate consumption based on both subsistence and cash acquisitions. The HIES carried out in Wallis and Futuna between June 2005 and May 2006 (Buffiere 2006) was used to determine that the annual per capita fish consumption (whole weight equivalent) in Wallis and Futuna was 74.6 kg, of which 98% was fresh fish.

The present study estimates the 2014 coastal fisheries production (subsistence and commercial) to be 825 mt. This equates to 68.7 kg of fish per capita across the Wallis and Futuna population of 12,011 (SPC PRISM website data). This figure does not consider imports of fishery products.

27.7 Exchange Rates

The average yearly exchange rates (XPF to the US dollar) used in this report are as follows:

2000	2001	2002	2003	2004	2005	2006	2007
130	133	127	106	96	96	95	87
2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	
80,0	83,22	90,27	92,16	89,88	86,01	98,13	