

Combining traditional and new fishing techniques: Fisherwomen in Niue, Papua New Guinea and Wallis and Futuna

Mecki Kronen¹

Fisherwomen in Niue

For both men and women, reef fishing in Niue is mostly a matter of lifestyle and enjoyment rather than need. Fishing is an integral part of the island's lifestyle but is not necessarily a source of income. Traditionally, there is a strong preference for reef fish, and prices fetched for the small amount caught and sold locally are higher than those for pelagic fish.

Seasonal *atule* (*Selar crumenophthalmus*) fishing is a highlight for female and male fishers, who use the same techniques when fishing from the intertidal reef flats (Fig. 1). Both sexes use modern (Fig. 2) and bamboo rods, with a double-line bamboo rod often used to increase the likelihood of a bite (Fig. 3). Gender differences in coastal finfishing in Niue relate to the use of paddle canoes, which are used almost exclusively by men. Those who use paddle canoes also target pelagic fish, which is probably why the average annual catch for men is higher than for women finfish fishers (Fig. 4). The latter only target smaller reef fish accessible from the tidal flats. It is therefore unsurprising that while 36% of all fishers are women, they account for only about 24% of the total annual



Figure 2. Niuean woman, accompanied by her children, fishing at night with a modern fishing rod [Mecki Kronen]



Figure 1. Niuean woman fishing with a bamboo rod from the intertidal reef flat [Mecki Kronen]



Figure 3. Niuean double-line bamboo rod [Mecki Kronen]

1. Results presented here refer to the coastal component of the PROCFish programme only. The programme is funded by the European Union and is implemented by the Secretariat of the Pacific Community (SPC), Reef Fisheries Observatory, Noumea, New Caledonia
2. Community Fisheries Scientist, Secretariat of the Pacific Community, Reef Fisheries Observatory, PROCFish-C, BP D5, 98848 Noumea Cedex, New Caledonia. Email: meckik@spc.int

finfish catch (Fig. 4). In addition, a few Niuean men may go spear diving for finfish and invertebrates on the rare occasions when sea and wind conditions are suitable. Spear diving was not reported by any of the women interviewed.

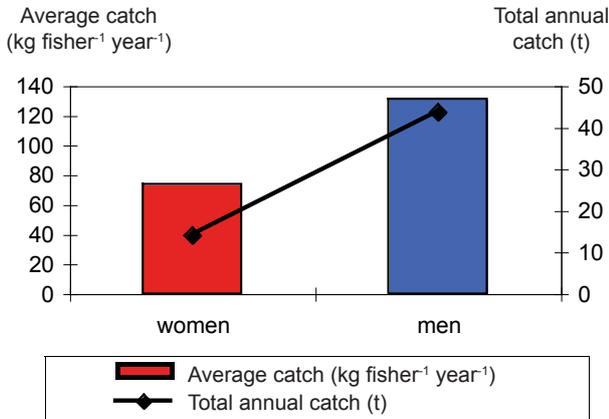


Figure 4. Average and total annual finfish catch for male and female fishers in Niue

Fisherwomen in Papua New Guinea

Socioeconomic fisheries surveys carried out in four Papua New Guinea communities show that similar numbers of women and men participate in finfishing (Fig. 5). Of the three communities surveyed, the Tsoilaunung site was the largest with a total of 363 households, while the other sites had only 70 (Panapompom), 77 (Sideia) and 85 (Andra) households. For all communities, there were differences in both the average annual catch rates obtained by women and men and in the habitats targeted (Fig. 6).

Firstly, women focus on habitats that are closer to the shore, such as sheltered coastal reef and lagoon areas, while men tend to target the outer reef. The differences in habitats targeted by men and fisherwomen also depend on the availability

and accessibility of fishing grounds. When outer reef habitats are very close to shore and easily accessible, there may be few or no gender differences in habitats targeted, as is shown when data for Panapompom and Sideai are compared with that for Andra and Tsoilaunung. The differences that are found may be explained by the fact that in rural coastal communities, men are still the main breadwinners, while women are responsible for the well-being of the family and thus a range of associated duties. As a result, men who go fishing for income are able to spend more time on a fishing trip and target more distant and promising habitats than women, whose budgets are limited and whose main aim is to fish for the family meal.

This argument is supported by the fact that there is only a slight difference in the average catch per trip for women and men if the same habitat is targeted. Women have a slightly lower average because they tend to stop fishing once they have enough to feed their family (any surplus may be shared with relatives and neighbours), while men may keep fishing after meeting the family's immediate needs with the aim of selling the surplus. In Papua New Guinea, women used different fishing techniques depending on their objectives. As shown in Figure 7, fisherwomen on Andra Island, who may also catch fish to be sold at the mainland market, may go spear diving or take an active role in gillnetting with their husbands or relatives. However, if their main objective is to catch enough for the family meal, they usually go out on their rafts and use handlines (Fig. 8). Although fewer women than men are involved in catching fish for selling, an increasing number of women in Papua New Guinea either catch fish for selling or organise a network to collect fish from other fisherwomen for processing and marketing (Fig. 9). These women use motor boats, when available, to fish, collect fish and seafood from other fisherwomen, and to travel to the mainland market to sell smoked fish and fresh seafood (Fig. 10).

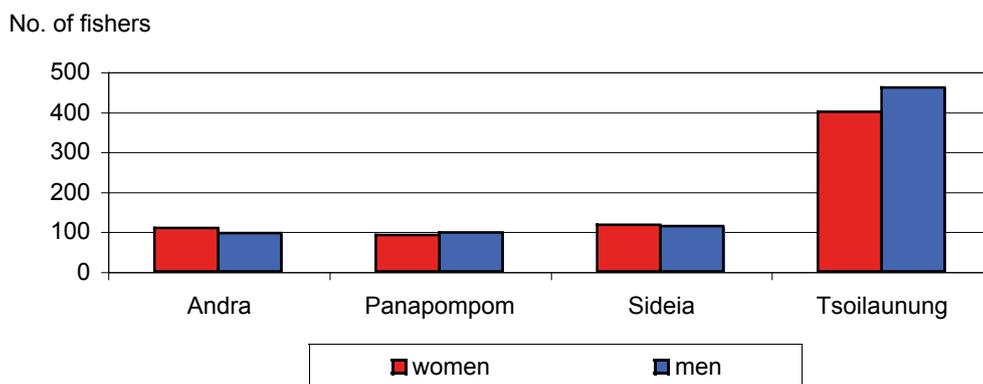


Figure 5. Number of finfish fishers by gender in Papua New Guinea communities.

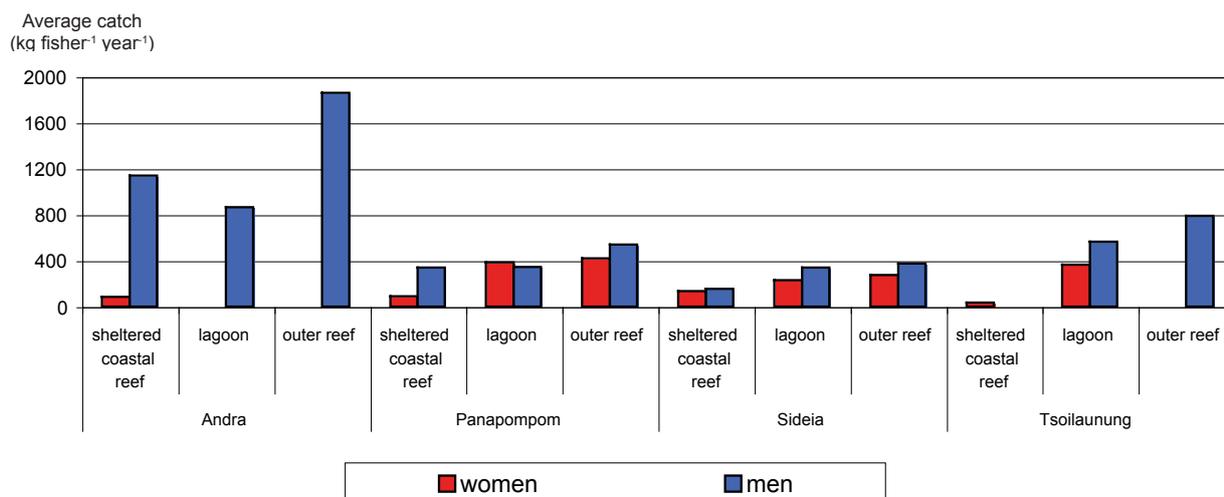


Figure 6. Comparison of average annual finfish catches by habitat fished, gender and community in Papua New Guinea



Figure 7. Spear-diving fisher on Andra Island, Papua New Guinea [Mecki Kronen]



Figure 8. Fisher from Tsoi, Papua New Guinea, on her outrigger canoe, handling fish for the family meal [Mecki Kronen]



Figure 9. Women from surrounding islands selling smoked fish at the Loringau market (Manus) [Mecki Kronen]



Figure 10. Tsoi fisherwomen selling smoked fish and fresh seafood (mud crabs) at Kavieng market, Papua New Guinea [Mecki Kronen]

Fisherwomen in Wallis and Futuna

Data collected in comparative surveys of four major communities in Wallis and Futuna showed that in Futuna, women and men participate in finfishing almost equally (Fig. 11). In Wallis, where two major fishing communities were surveyed, women participated much less than men in finfishing.

Again, when the average catch per fishing trip for women and men is compared, there is much a smaller difference for Futuna than for Wallis (Fig. 12). A possible explanation is that on Futuna, reef fish is not usually caught to sell. Futuna enjoys a very traditional way of life and fish is still widely considered as a non-monetary commodity. In addition, unless fishers have a motor boat, the geomorphology of the island limits finfishing to casting or netting from the intertidal flats into the outer slope during low tide. Recently, the adoption of trolling from motor boats, which requires a much larger investment than netting or casting by walking along the reef flats, has triggered commercial selling of pelagic fish at the local level, and to some extent for export to Wallis. On Wallis, both reef and pelagic fish are commercialised and fishing is an important primary or complementary source of income. Here, women fish occasionally, rather than regularly, for leisure and for home consumption, while fishing on a regular basis for selling is the domain of men.

Both traditional and modern fishing techniques are used on Futuna. *Atule* (*Selar crumenophthalmus*) is a special, traditional fishery harvested exclusively by women on Futuna. Although women reported changes in the seasonality and amount of *atule* occurring along the usual shorelines, they continue the traditional practice of harvesting this fishery between January and July each year. Usually, at least two to three, but often all the women (20–30) of a community, fish three to four times a week for *atule* during the high season. A 200-metre long gill net (or

2 x 200 m) is set in shallow water (Fig. 13) and a traditional wooden canoe is used to transport the net and the catch. Each trip takes around 2 hours and no ice is used. An average catch is about 50 to 100 *atule* of 24–32 cm fork length. It was reported that in the past, catches were much bigger, averaging 500 to 1000 *atule* of 24–32 cm fork length. According to tradition, the *atule* catch cannot be sold but is distributed among fisherwomen and other community members. When targeting other reef species, 10 to 20% of all fisherwomen were found to use cast nets, in the same way as fishermen (Fig. 14). Cast nets may be used exclusively or in combination with handlines or gill nets. However, men were more likely to use hand-held spears, and spear diving, in combination with the use of gill nets (Fig. 15). Scoop nets (*kuki*) are popular for catching small fish on an ad hoc basis for the next meal and were used by about 10% of all fishers, particularly women (Fig. 16). Fish poisoning is rarely practised.

Acknowledgements

I am indebted to everyone who made possible the field surveys and data collection, within the framework of PROCFish-C, on which this paper is based. In particular, I would like to thank the Directors of the Fisheries Departments in each of the three countries: Brendon Pasisi, Director and Head of Fisheries Niue, Augustine Mobiha, Executive Manager of the National Fisheries Authority, Papua New Guinea, and Bruno Mugneret, Service de la Pêche de Wallis et Futuna. I also would like to thank fisheries colleagues in all three countries who assisted in data collection and field survey work: Fiafia Rex, the former Niue Fisheries Officer in charge, Victoria Liumaihetau who helped with the interviews in Niue, Ian Liviko, PROCFish-C attachment in Papua New Guinea, and Amalia Fotofili, Fisheries Officer, Wallis and Futuna, as well as Maleta Mugneret and Helena Takaniko who helped with field data surveys on Wallis and Futuna respectively.

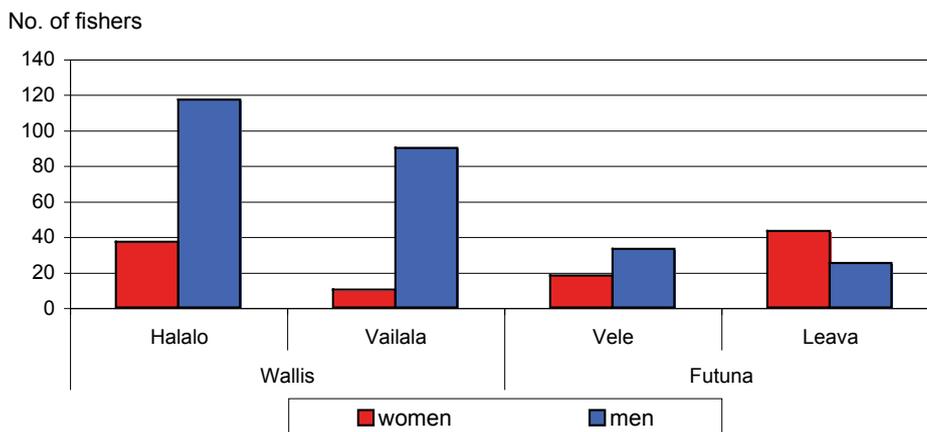


Figure 11. Number of finfish fishers by gender and community on Wallis and Futuna.

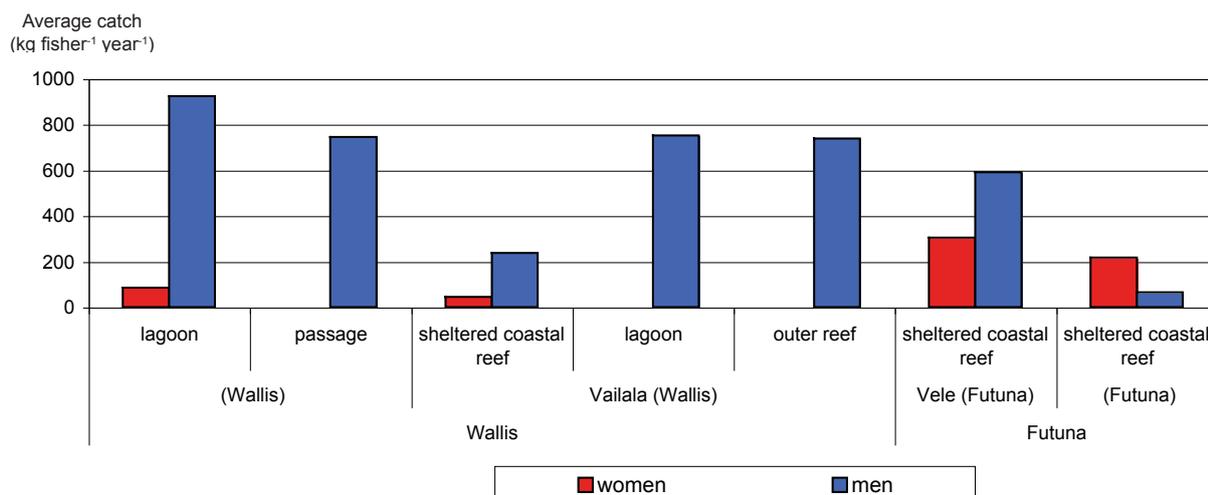


Figure 12. Average annual finfish catch by habitat fished, gender and community on Wallis and Futuna



Figure 13. Futuna fisher with atule net [Mecki Kronen]



Figure 14. Futuna fisher throwing a cast net, a technique that is also frequently used by local women [Mecki Kronen]



Figure 15. Futuna fisher cleaning her gill net, [Mecki Kronen]



Figure 16. Scoop net “kuki” used to capture small fish on Futuna [Mecki Kronen]