

Selling and marketing fish in the Solomon Islands

Robert Pomeroy^{1*} and Di Yang¹

More than half of all households in the Solomon Islands are involved in some sort of fishing activity, with the percentage of households involved increasing with increasing distance from urban areas (Govan et al. 2013). A common characteristic of these households is a heavy reliance on marine resources for food (MECM 2008; ADB 2010). In order to effectively manage the fisheries in the Solomon Islands, improved information on fish resources within the Solomon Islands is needed. The objectives of the Solomon Islands Mobile Platform project (Hapi Fis, Hapi Pipol) were to: 1) provide the Solomon Islands Ministry of Fisheries and Marine Resources (MFMR) with information to improve MFMR's decision-making capacity on fisheries management; and 2) establish a baseline of information on fish sellers and marketing for management and development activities in the country (Rhodes et al. 2013).

Methodology

The Hapi Fis, Hapi Pipol project focused on four coral reef fish markets in Honiara, Guadalcanal Province: Ball Beach, Maro Maro, Fishing Village and Honiara Central Market (HCM). Honiara is the capital of Solomon Islands and is where the commercial demand for seafood is considered to be the greatest. Each of the four markets surveyed has different characteristics in the type and scope of fish sales. All Honiara fish markets provide sales opportunities for the selling of coral reef and nearshore pelagic fish, while HCM and Fishing Village also sell invertebrates and pelagic fish. Among the four markets, HCM is the largest and is a mixed market, selling a large assortment of fresh, prepared and imported food items, meats, clothes, curios and housewares, among other local and imported items.

Initial survey development followed market visits in October 2012. A fish seller survey was developed and carried out over a three-month period in 2013. The fish seller survey consisted of 98 questions grouped into several categories, including demographic characteristics, business assets, business operations, fish purchases, fish transportation, fish selling, processing, operating expenses, and perceptions and attitudes about the business. The initial market reconnaissance identified approximately 100 fish sellers operating at the four markets. This served as the sample population for the survey.

Results

Demographic characteristics

According to the survey, most fish sellers (76%) in the seven provinces that supplied fish to Honiara were

males. Guadalcanal and Honiara provinces had more female fish sellers. The average age of both male and female fish sellers was 33; with males having a broader age range than females.

The number of years selling fish varied from 1 to 35 among all respondents. The average male and female fish seller had nine and eight years of experience, respectively. Thirty-four percent of respondents (22% male, 12% female) reported that their primary occupation was as a full-time fish seller. For males, the next most common occupations were fishermen (16%) and farmers (11%). Over 10% of females reported that their second primary occupation was as a teacher. Seventy-seven percent of respondents indicated that they did not have a secondary occupation. The data on primary income source showed that fish selling was the dominant income source (63%) for fish sellers. The majority of respondents (68%) did not have a secondary income source. Nearly 40% of fish sellers in the survey had a primary education, 40% had a secondary education, and 21% had a college education or above.

Business assets

On average, each fish seller owned 7.49 baskets, which was the top asset owned by fish sellers in all seven provinces (Fig. 1). In addition, a canoe (1.59 per each) and an "esky"² (1.51 per each) were the second and third most commonly owned business asset by respondents.

Business operations

Single business enterprise was the major (55%) type of business structure, followed by a partnership (26%) and family business (19%). Most respondents (61%) started their business using their own money. Family

¹ Department of Agricultural and Resource Economics, University of Connecticut, USA

² An "esky" is also called an "ice chest" in Micronesian countries and in American Samoa.

* Email: robert.pomeroy@uconn.edu

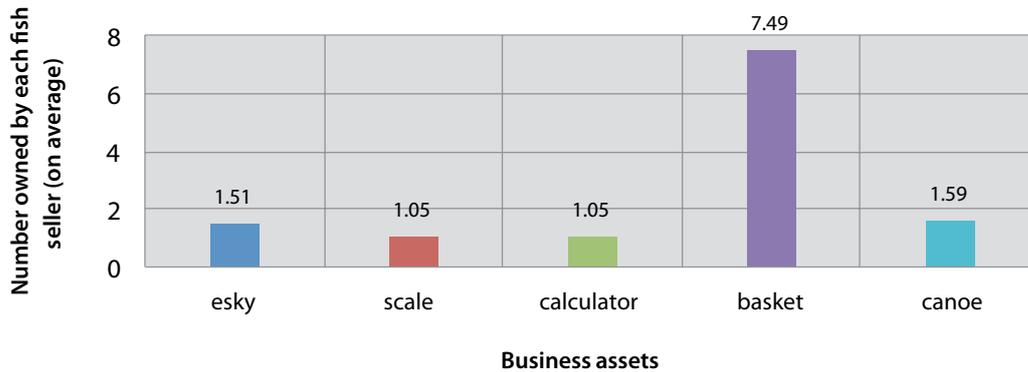


Figure 1. Average number of business assets owned by fish sellers, Solomon Islands.

employees (29%) were the majority among all four kinds of employees, which also included fully paid employees (19%), partially paid employees (14%) and others (21%). Over half of all respondents (53%) kept business records of both purchases and sales (e.g. amount, price).

Of the 100 fish sellers, 73 fished for their own business, and 96% did not buy fish from other fish sellers. More than 63% of fish sellers bought fish directly from fishermen. The survey also found that 85% of all respondents processed fish themselves, and 94% needed to transport fish from the point of purchase to the market. Almost half of all fish sellers sold fish to value-adders (e.g. restaurants, stall owners).

In an average week, fish sellers sold 19,694 kg (90.3%) of fish to the retail market, 1,850 kg (8.5%) to the

value-adder market, and 265 kg (1.2%) to other fish sellers (Fig. 2). The trade from Central Island Province had the biggest share of both the retail market (26.8%) and value-adder market (37%).

Fish purchases

The majority of primary purchases are made locally. For example, 80% of fish sellers in Guadalcanal Province purchased fish in Guadalcanal Province; 81% of fish sellers do not have a secondary place to purchase fish. Nearly 90% of respondents competed with other fish sellers. In Central Island Province, fish sellers purchased 6,368 kg of fish weekly on average, which was the highest amount (35.9%) among all six provinces (Fig. 3). This was followed by Western Province (4,748 kg; 26.9%),

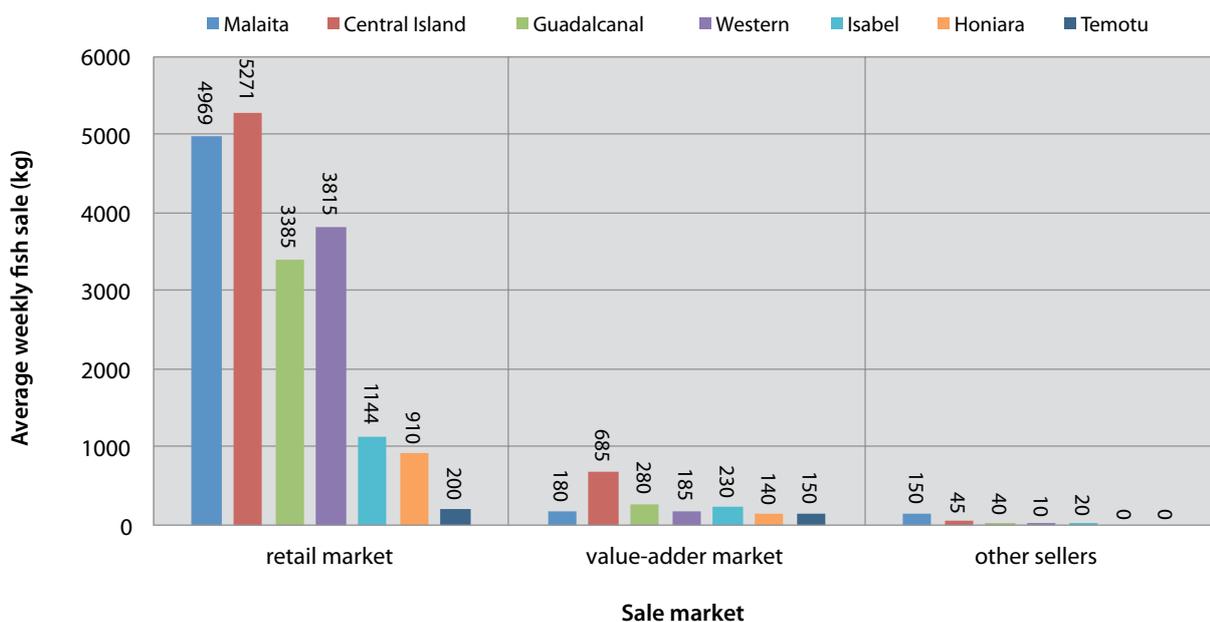


Figure 2. Average weekly fish sales in Honiara, Solomon Islands.

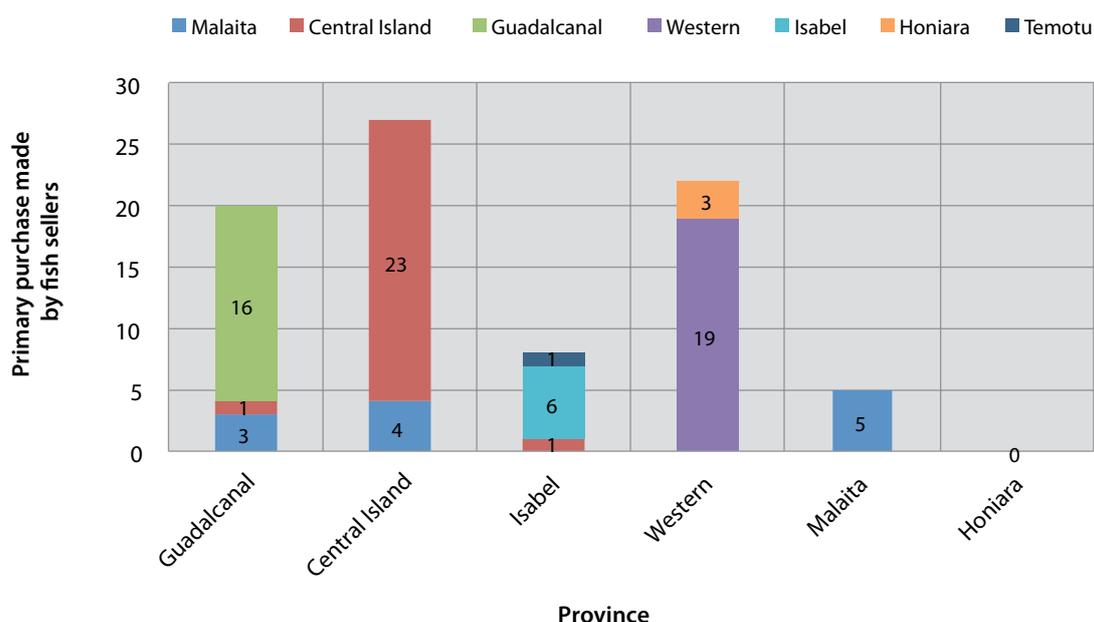


Figure 3. Primary fish purchase distribution by province, Solomon Islands.

Guadalcanal Province (3,811 kg; 21.5%), Isabel Province (1,674 kg; 9.4%), and Malaita Province (1,160 kg; 6.5%). Respondents reported not purchasing fish in Honiara.

The top three factors that determined how respondents selected fish to purchase were size (36.6%), quality (23.2%) and species (19.5%). Only one respondent made a purchase based on the price of the fish. Most buyers were willing to purchase fish from skilled and/or experienced fishermen and the price variation was relatively small on the market. On average, the number of days in a week that fish sellers purchased fish was: 2.3 days in Central Island Province, 2.1 days in Guadalcanal Province, 2.0 days in Malaita Province, 1.9 days in Isabel Province and 1.8 days in Western Province.

Sixty respondents indicated that the type of fish they purchased varied by time of year, with 44% of sellers reporting that they were always able get the quantity of each species they want. Sixty-nine respondents purchased fish with cash, and only two respondents used a credit card.

The survey found that the majority of fish sellers (94.4%) purchased fish by weight, while only a small number of sellers (5.6%) purchased fish by lot³, and no fish seller purchased fish by piece. Respondents indicated that the top three factors that determined the price at which to purchase fish were the quality (18%), competition (13%) and price agreement between fishermen (11%). Among all respondents who purchased fish, 46 (57.5%) indicated that they did not bargain for the purchase price. The survey also found that for all respondents who

purchased fish, most provided certain services to the fishermen they bought from. Food was the major service provided (52.6%), followed by gear (21.8%), credit (5.1%), boat (1.3%) and cigarettes (1.3%). Fourteen respondents (17.9%) not provide any service to the fishermen they bought their fish from.

Nearly half of all respondents (49%) indicated that the weather was the most important factor affecting the supply and price of fish, while the number of fish buyers and fishermen was the second factor affecting the supply and price of the fish.

Fish transportation

The majority of respondents (92.7%) reported that they transported fish by boat, while the remainder (7.3%) transported fish by car or truck. According to the survey, almost all respondents (96.4%) had problems with transportation. Mechanical problems that caused delays was the most mentioned problem (26.5%) (Fig. 4). In addition, the cost of fuel (25.3%) and inefficient transport services (21.7%) were the second and third most mentioned transportation issues. Weather, mentioned by 19.2% of respondents, was also a problem in transporting fish. The cost of fuel was the most prominent problem in Central Island Province.

Fish selling

The majority of respondents (82%) reported that they sold fish at the Honiara Central Market, while the remainder of respondents sold fish at the Ball Beach/

³ A lot is a pile of fish of either one species or mixed fish species.

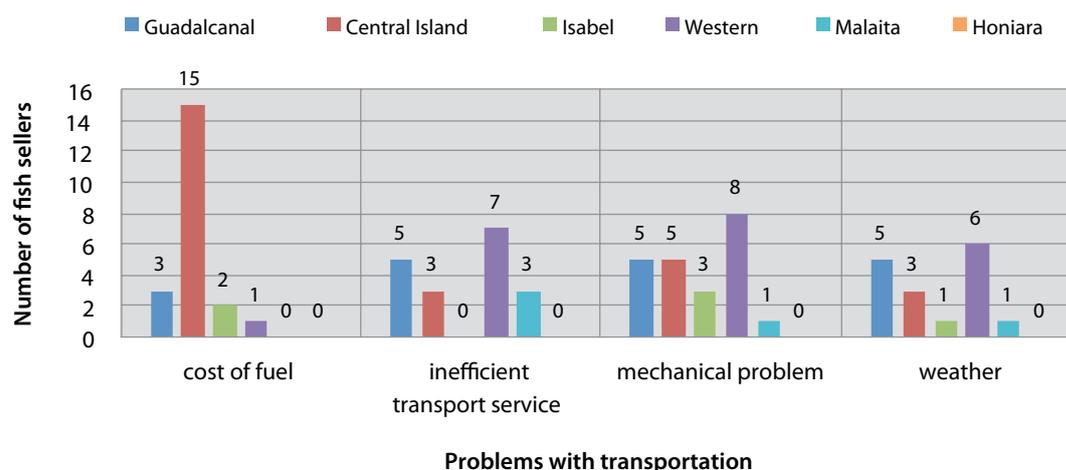


Figure 4. Problems with transporting fish as reported by fish sellers, Solomon Islands.

Waikiki (14%), Maro Maro (3%) and Hotel (1%) markets. The majority of respondents (86%) did not have a second market to sell fish. The top three reasons why fish sellers chose their primary market were more customers (62.2%), only available place (22.0%), and accessibility (7.3%).

The majority of respondents (43%) sold fish two days a week on average, while the remaining respondents sold fish three days a week (24%) and one day a week (13%). Nearly half of fish sellers (46%) indicated that it took two days to sell one esky full of fish, on average. The majority of fish sellers (83%) sold fish by weight. In an average week, 18,396 kg of fish were sold at the Honiara Central Market; 2,166 kg were sold at the Ball Beach/Waikiki; 778 kg were sold at the Maro Maro; and 150 kg were sold at the Hotel market.

The factors that determined the price at which to sell fish were demand and supply (33%), quality and species (23%), and standard and/or current selling price (13%). Almost 30% of fish sellers (29.8%) received information on market price and supply by observing the retail market; however, more than half of fish sellers (57%) did not discuss prices and supply among themselves. The majority of respondents (79%) agreed that market price was influenced by large fish sellers. More than 60% of respondents indicated that they did not have a certain location at the market to sell their fish, and 67% provided services different from other sellers in order to sell their fish.

Nearly 80% of fish sellers reported that they had return or main customers, and 90% of fish sellers agreed with the fact that there were certain periods of high demand by customers. The highest daily demand for fish occurred from the afternoon to the evening. The majority of consumers (79%) had a specific request for fish, and the top

three factors that consumers considered when they made purchases were species (38%), price (30%) and size (9%).

Processing

The majority of respondents (97.7%) preferred to purchase processed fish. Over half of respondents (54%) sold gutted fish, and forty respondents (40%) sold whole fish. The majority of fish sellers (69%) gutted fish before selling them and nearly twenty percent of them (19%) did not process the fish in any way. The primary way (95%) to maintain the freshness of fish was to keep them in ice. Nearly half of respondents (47%) had experienced loss due to spoilage. Almost sixty percent of the fish sellers (59%) had fish left over in the esky.

Expenses

The cost of purchasing an esky-load of fish varied from SBD⁴ 1,510 to SBD 2,086 depending on the province, with Western Province being the most expensive. The expense for selling one esky varied from zero to SBD 2,000, depending on the market (Fig. 5).

For the respondents who purchased fish from Isabel Province, it took 4.9 days to buy, transport and sell one single esky-load of fish on average, which was the longest time among all provinces. At the Honiara Central Market, it took 3.9 days to buy, transport and sell one esky-load of fish, on average; this is followed by Malaita Province, in which it took 3.2 days on average. For those who sold fish at the Ball Beach/Waikiki market, it took only 1.1 days to buy, transport and sell one esky, which was the shortest time for all provinces.

The majority of respondents (89%) did not borrow money to operate their business and for those who did, five respondents borrowed from a family partnership,

⁴ The local currency is the Solomon Islands dollar (SBD). SBD 1.00 = USD 0.13 (January 2015).

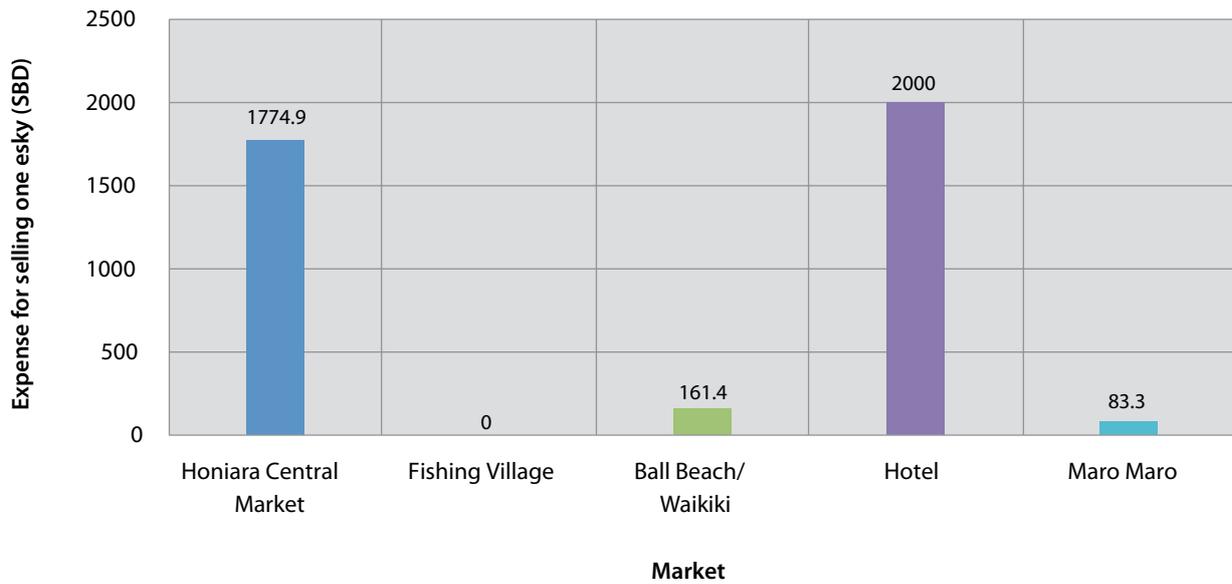


Figure 5. The expense for selling one esky-load of fish in different markets.

four from relatives, and two from a bank loan and/or community funds.

The main expense in buying and selling one esky-load of fish in the six provinces was ice, followed by market fees and fuel.

Perceptions and attitudes

Price (33.3%), supply (27.3%) and costs (16.2%) were the top three business problems that fish sellers faced. The largest proportion of respondents (17.3%) had no answer to solve them, more than 10% of respondents (12.2%) tried to minimize the cost, and another group of respondents (12.2%) chose to negotiate with suppliers.

Nearly half of respondents (47%) indicated that they noticed a decrease in the amount of fish landed during the last five years, and Western Province (29.8%) and Malaita Province (25.5%) were the top two provinces where this has been observed the most. On the other hand, 45% of respondents noticed an increase in the amount of fish landed during the last five years, and Central Island was where this was noticed the most. The majority of respondents (32.7%) showed that they thought the decrease was due to overfishing. As for reasons for the increase, over ten percent of respondents (12.2%) thought it was due to the high demand for fish and another nine percent of respondents thought it was due to the expectation of higher profits in the fish business.

More than eighty percent of respondents (84%) noticed changes in the species and size of fish over a five-year period, and this was the case for all provinces.

Respondents suggest that the reasons for this change were overharvesting (48%) of fish in general, and the harvesting of juvenile fish (i.e. those that had not reached sexual maturity at the time of capture) (6%). Another group of respondents (12%) mentioned that they did not know the reason for changes in fish species and sizes. The majority of respondents (91%) indicated that they could sell more fish if production was increased.

Over half of respondents (54%) indicated that the price they paid for fish has been increasing during the last five years and less than twenty respondents (18%) indicated that there was no change in the price they paid to purchase fish. The primary reason for a change in purchase price was the increase in costs of goods and services (18%), increase in demand for fish (13%), and competition with other fish sellers (11%). More than one-third of respondents (33%) indicated that they did not know the reason. The majority of respondents (73%) indicated that the selling price had been increasing over the last five years. The primary reasons for that were due to expenses incurred for fish purchases (33%) and a greater demand for fish from consumers (27%); nearly 15% of respondents did not have an answer. The majority of respondents (56%) wanted improved facilities such as water, cold storage room, and toilets at the retail markets. Eight percent of respondents wanted to establish a fish market association and seven percent wanted to have more space for fish sellers. The survey showed that vendors are willing to work with the Ministry of Fisheries who are able to provide training opportunities (92%) and market information (88%), establish a sellers association (87%) and improve market services (87%). This will also provide an avenue of education and



Fish seller, Honiara market (image: Malo Hosken).

management for the ministry.

Among vendors, 63% derived their household income exclusively from fish sales, while 55% of vending operations were sole proprietorships and 52% kept business records. Fish selling in Honiara is a male-dominated (74%) enterprise. The average age of fish sellers was 33, and the average number of years of vending experience among all respondents was 9. The exclusive sale of gutted fish at the main market inhibited evaluations of fish reproductive life history.

Preliminary findings from the Hapi Fis, Hapi Pipol market survey program have provided useful insights into the operation and sale of reef fish in Honiara's four main markets. These insights are allowing initial trend assessments on the volume, origin and composition of fish

sales (as resource types), findings that were previously unavailable to management decision-makers. From these initial survey results, MFMR can now conceptualize the amount of fishing pressure being placed on the country's reefs from commercial fishing efforts.

Acknowledgements

Support by the Solomon Islands Ministry of Fisheries and Marine Resources enabled the successful development of the Hapi Fis, Hapi Pipol project. Funding for the core project was provided through the US Agency for International Development Grant No. LCP LWA Award No. LAG-00-99-00048-00 through the Coral Triangle Support Partnership, a consortium of non-governmental organizations led by the World Wildlife Fund and Conservation International and The Nature Conservancy.

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