

## Summary of the importance of flyingfish fisheries in the eastern Caribbean

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The status of flyingfish fisheries in each of the eastern Caribbean islands (Barbados, Dominica, Grenada, Martinique, St. Lucia, St. Vincent, Trinidad and Tobago) at the time of completion of the Eastern Caribbean Flyingfish Project (ECFFP) in 1993 is provided by the country specific papers (Chapters 1-7).

One of the most dramatic changes in the flyingfish fisheries of the region since 1987 was a marked decline in the landings of flyingfish for consumption in Grenada. Flyingfish used to account for approximately 42% of all fish landings for consumption in Grenada, and had declined to less than 1%. This apparently resulted from the development of a successful small-scale longline fishery which targets only large pelagic species (e.g. tuna and billfish) for consumption (see Samlalsingh et al. 1999). Flyingfish were then caught almost exclusively as baitfish to support the new longline fishery. This development highlighted the importance of flyingfish as bait in alternative fisheries, and indicated a possible new development path for other island fisheries.

A preliminary assessment of the socio-economic importance of the flyingfish fisheries in the eastern Caribbean region, as summarised by participants at the final ECFFP workshop is given in Table 1, showing annual total flyingfish landings and number of persons employed in the flyingfish fisheries of each island. The question of how best to evaluate the economic worth of the fishery is important since simply providing a total catch and an ex-vessel wholesale price for the fish does not give an adequate picture of the different marketing strategies nor the additional revenue and employment generated from the sale of fresh flyingfish. These data are better presented in the form of a chart indicating the number of marketing avenues and their relative importance, and the cost of fresh/uncooked fish at each marketing stage for each island. It was felt that this would allow a better evaluation of the total economic worth of the flyingfish catch and indicate the various

employment opportunities which resulted. A flow-chart of the various flyingfish marketing strategies found in the eastern Caribbean (Figure 1) and a table with current marketing strategies and prices in the eastern Caribbean were produced by participants of the final ECFFP workshop (Table 2).

**Table 1. Relative importance of flyingfish fisheries in the eastern Caribbean. Total annual flyingfish catch represents an average of early 1990s (except for Martinique where data were available for 1988 only). The proportion of total fish catch is an average over the early 1990s or an estimate by the country. Ex-vessel value is the average price to fishermen through the 1991/92 fishing season. Employment represents either the number of fishers directly employed (D) including full (F) and part-time (P), or the total number of all persons employed directly and indirectly (D+I) by the flyingfish fishery.**

Country	Annual flyingfish catch (mt)	Proportion of total fish catch (%)	Ex-vessel value of flyingfish catch (US \$)	Employment generated by flyingfish fishery
Barbados	2,500	57	3,525,000	6,000 (D+I)
Dominica	155	40	638,577	2,000 (D+I)
Grenada	11.5	1	5,635	500 (D, P)
Martinique	370	11	1,110,000	2,000 (D, P)
St. Lucia	94	20	77,080	1,800 (D, P)
St. Vincent	< 1	< 1	< 1,650	1,500 (D, P)
Tobago	359	50	186,680	300 (D, F)
Totals	3,490	-	5,542,972	14,100 (D+I)

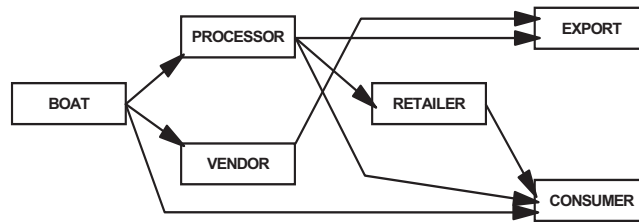


Figure 1. Flow-chart showing alternative marketing strategies for fresh flyingfish.

Table 2. Comparison of prices in US \$ per kg paid for fresh/uncooked flyingfish in the eastern Caribbean at different marketing steps. Prices represent average prices paid over the 1991-1992 fishing season (? indicates unknown values, - indicates not applicable).

Sale	Barbados		Dominica		Grenada		Martinique		St. Lucia		St. Vincent		Tobago	
	Price (US \$/kg)	% catch	Price (US \$/kg)	% catch	Price (US \$/kg)	% catch	Price (US \$/kg)	% catch	Price (US \$/kg)	% catch	Price (US \$/kg)	% catch	Price (US \$/kg)	% catch
Boat-consumer	1.41	?	4.12	98	0.37-0.49	?	3.00	?	0.82	60	1.65	?	0.52	?
Boat-vendor	1.33	?	-	0	0.37-0.49	?	3.00	?	0.82	25	0.61-0.82	?	?	?
Boat-processor	1.33	?	?	2	0.37-0.49	?	3.00	?	0.82	15	-	?	0.26	?
Vendor-consumer	1.41-8.93*	-	-	-	0.62	-	?	-	1.09	-	2.47	-	-	-
Vendor-export	-	-	-	-	-	-	-	-	-	-	-	-	?	-
Processor-retailer	6.45	-	-	-	-	-	?	-	4.94	-	-	-	1.69	-
Processor-consumer	-	-	-	-	1.44	-	-	-	6.59	-	-	-	1.88	-
Processor-export	6.95	-	-	-	2.47	-	-	-	-	-	-	-	?	-
Retailer-consumer	8.73	-	-	-	2.97	-	9.00-15.00	-	6.59	-	-	-	2.07-2.35	-

\* The higher price refers to filleted fish.

The exercise emphasised, even with only crude indices, the enormous importance of flyingfish fisheries to the region, with an average of 3,500 mt of flyingfish being landed annually at an ex-vessel value of at least US \$ 5 ½ million, and some 14,000 persons being employed directly or indirectly by flyingfish fisheries (Table 1). It also emphasised the lack of socio-economic information available at the time for this important regional fishery, and resulted in a

recommendation from the participants that a comprehensive socio-economic study be conducted.

## REFERENCES

Samlalsingh, S., H.A. Oxenford and J. Rennie. 1999. A successful small-scale longline fishery in Grenada. Proc. Gulf Caribb. Fish. Inst.. 46: 3-21.