

ANALYSIS OF BILLFISH FISHERIES IN GRENADA

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SUMMARY

The Grenada artisanal and industrial fisheries for billfish are described, including foreign longline vessels which are licensed to operate out of Grenadian ports. Historical fisheries for Istiophoridae off Grenada were reconstructed from landings data from 1978-1988. The landings for sailfish and marlin were about 30 and 2 MT, respectively, during the early part of the fishery. In recent years, the fishery for sailfish, in particular, has expanded continuously to well over 100 MT by 1988.

RESUME

La pêche artisanale et industrielle d'istiophoridés à Grenade est décrite ici, y compris les palangriers étrangers avec licence pour pêcher à partir de ports de Grenade. L'histoire de la pêche aux istiophoridés au large de Grenade a été reconstituée à partir de données de débarquement pour 1978-88. Les débarquements de voilier et de makaira ont été respectivement de 30 TM et 2 TM environ lors des débuts de la pêche. Ces dernières années, la pêche du voilier, en particulier, s'est accrue de façon continue jusqu'à atteindre plus de 100 TM en 1988.

RESUMEN

Se describen las pesquerías industrial y artesanal para marlines de Granada, incluyendo los palangreros extranjeros con licencia para operar desde puertos de Granada. La pesquería histórica de istiophoridos frente a Granada se reconstruyó en base a datos de desembarque del periodo 1978-1988. Los desembarques de pez vela y marlines alcanzaron 30 y 2 t respectivamente. En los últimos años, la pesquería del pez vela, en particular, se ha ido desarrollando progresivamente hasta capturar una cifra superior a las 100 t en 1988.

INTRODUCTION

This report summarizes the fisheries for billfish in Grenada from 1978 to 1988. The International Commission for the Conservation of Atlantic Tunas (ICCAT) initiated an Enhanced Research Program for Billfish in 1986 and Grenada participated in this program in 1988/89.

The Ministry of Industrial Development and Fisheries is responsible for collecting data at fish landing centers such as Gouyave, St. John's, Melvill street Fish Market, St. George's, and the foreign fishing vessel which are joint venture with local investigators. Most of the samples taken on the island are done at Gouyave Fish Center. Billfish are measured, sexed, and weighed by two assistant samplers according to ICCAT specifications given in the billfish sampling manual. The billfish samples represent coverage of the fisheries from both artisanal and industrial components.

Characteristics of the Fisheries

Fishing is practiced throughout the entire island for commercial and/or subsistence reasons. The different species of fish caught can be separated into three classes: (a) Fish caught by ocean going boats using longlines and trolling equipment (mostly scombridae, istiophoridae, and xiphiidae); (b) Fish caught by using bottom fishing techniques, mainly benthic species and certain pelagic species; and (c) Small pelagic species caught mainly by beach seines and dipnets.

The ocean going boats from the artisanal fishery average 18-25 feet and use outboard engines varying from 25 HP - 65 HP, although there are exceptions of larger and more powerful motors used occasionally. These local boats operate longlines of an average of 70-80 hooks, depending on the size of the boat. Hand trolling gear is also used for catching smaller pelagic species of Scombridae and Coriphynidae. The baits used are from the families of Ecocoetidae and Hamiramphidae. For longlining or trolling, live or dead bait is used, depending on the preference of the fishermen and the availability of the preferred live bait.

Fishing with the above longline methods, it is important to note that local boats do not often capture swordfish. Longlines are made to reach a depth of 25-40 fathoms and are fished during daylight, targeting larger pelagics such as blue marlin, white marlin, sailfish and yellowfin tuna. Swordfish are normally caught at 70 fathoms during the day, although they surface to 40 fathoms at night. However, local boats do not normally fish at night.

Joint Venture Fishing Vessels

There are large fishing vessels (40-70 feet in length) owned by a U.S. company--Merritt Seafood Company, Florida, and local permits were issued to each boat for their operation in Grenadian territorial waters. These longliners are mainly interested in swordfish and tuna which are exported to the U.S. The by-catch (sailfish and marlin) are off-loaded in Grenada and sold to the artisanal fisheries and/or other local vendors.

There are two types of legal arrangements made which permit foreign boats to fish in local waters. A license for foreign fishing vessels allow these boats to fish in and around Grenada and also to use the port facilities. Also, a local license for foreign/local vessels can be obtained. The former is associated with boats exclusively owned by a foreign company and now have at least 51% ownership. The boats with 51% ownership are referred to as local fishing vessels. They account for a large portion of billfish landed on the island.

A total of eight joint venture fishing vessels used Grenada during the fishing season. Four of these vessels were about 50 foot in length, and four were 68 foot long. The four 50 foot vessels had a foreign/local license and 51% local ownership, while the other four were permitted to fish as foreign vessels with a specified period of the year.

In order to obtain data from these boats, the sampler is expected to be on the boat as an observer. There is no time to collect the required samples when the fish are landed because they have already been cleaned, weighed, marked, and packed in ice for export. Unfortunately, an observer trip was not possible during the 1989 fishing season due to logistical difficulties.

Historical Billfish Landings

Figure 1 gives the historical landings for sailfish (Istiophorus platypterus) and blue marlin (Makaira nigricans) from 1978 to 1988 for the artisanal fishery. The by-catch from recent industrial longline fisheries are not included in these

statistics (Table 1). The landings for both species started at low levels in the late 1970's and then increased substantially during the 1980's, reaching a peak in 1988 and 1987, respectively, for sailfish and blue marlin. The local name for sailfish is ocean gar, and this may have caused some confusion with the landings in the past. Several recreational billfish tournaments also have been held in Grenada in the last several years, but these landings are not documented as of this date.

SAILFISH AND BLUE MARLIN CATCH GRENADA (1978 - 1988)

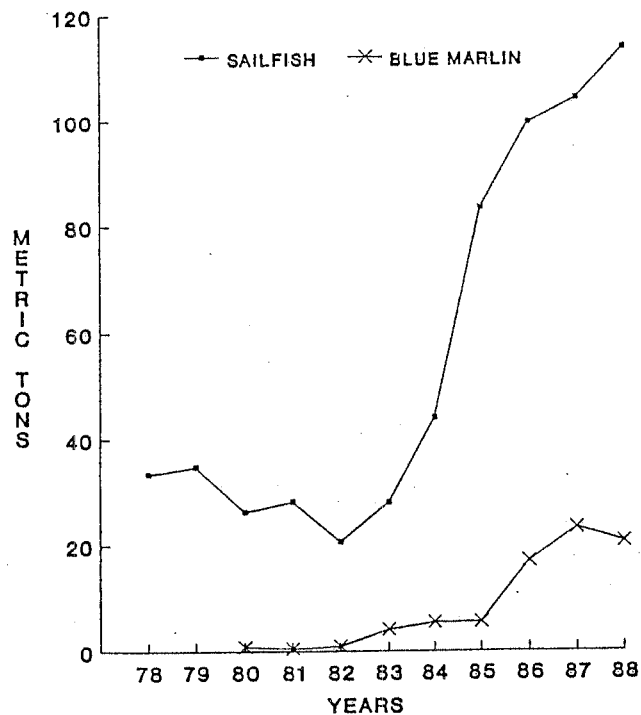


Table 1. Nominal landings (pounds) of sailfish (*Istiophorus platypterus*) and blue marlin (*Makaira nigricans*) from the artisanal longline fishery in Grenada, 1978-1988.

Year	Sailfish (lbs)	Blue Marlin (lbs)
1978	73,430	
1979	76,398	
1980	57,708	1,888
1981	61,924	1,132
1982	45,455	2,075
1983	61,649	9,135
1984	96,684	12,122
1985	183,559	12,299
1986	218,971	37,245
1987	229,248	50,932
1988	250,283	45,266