

**REPORT OF THE CARICOM FISHERIES RESOURCE ASSESSMENT
AND MANAGEMENT PROGRAM (CFRAMP)**

Pelagic and Reef Fishes Resource Assessment Unit
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SUMMARY

Nominal catch statistics for large pelagic species are presented for the period 1990-1994. In 1995, the Program's Pelagic and Reef Fishes Resource Assessment Unit continued implementation of a two year program of biological data collection in participating countries. The CFRAMP/ICCAT project to tag billfish and large tunas conducted 4 field trips using live bait. Grenada and Jamaica continued to participate in the ICCAT Programme for Enhanced Research for Billfish. In addition, investigation of the stock structure and migration patterns of four large pelagic species including blackfin tuna will commence in late 1995.

INTRODUCTION

At present, twelve Caribbean countries participate in the CARICOM¹ Fisheries Resource Assessment and Management Program (CFRAMP) which has as its goal the promotion of management and conservation of fishery resources in the CARICOM region, to permit their exploitation on a sustainable basis. The fisheries in these countries are largely artisanal. This document briefly reports on annual large pelagic landings of CFRAMP participating countries for 1990 to 1994, and CFRAMP's as well as individual participating country activities in large pelagic research for the period 1994-1995.

LARGE PELAGIC CATCHES

Table 1 provides landing statistics for large pelagics in those participating countries with large pelagic fisheries. As noted in table 1, some categories can include more than one species, and may represent a different group of species for each country. Due to uncertainties in species identification at the data collection level in Barbados, catches previously recorded as yellowfin tuna and skipjack tuna no longer exist; these catches are therefore now included in the unclassified tunas category in table 1. The statistics presented for Grenada have been revised

¹CARICOM - Caribbean Community and Common Market

LARGE PELAGIC RESEARCH ACTIVITIES FOR 1994/1995

to incorporate a raising factor to obtain estimates of overall total landings. CFRAMP is continuing efforts to standardise fishery data collection systems in all participating countries.

During 1995, CFRAMP staff trained fisheries personnel in biological data collection and supplied field kits to all twelve participating countries. Data collection has commenced in several countries, and CFRAMP staff are actively involved in monitoring work progress in-country. At present, a number of countries are expected to collect length frequency data on several large pelagic species including yellowfin tuna, skipjack tuna, blackfin tuna, king mackerel and wahoo. Trinidad and Tobago is expected to collect biological data on albacore, bigeye tuna, Spanish mackerel, and several shark species. Length frequency and maturity data on Spanish mackerel and various shark species will also be covered for fish landings in Guyana.

During the year, CFRAMP staff, in collaboration with staff of the ICCAT Billfish Tagging Program, conducted 4 field tagging trips in the EEZ of St. Vincent and the Grenadines, using the St. Vincent Fisheries Division's research vessel, outfitted with a livebait well. For 3 trips, over 100 hooks using live bait (goggle-eye scads (*Selar crumenophthalmus*) and round scads (*Decapterus mackerellus*)) was used. The 4th trip was conducted in September 1995, using 100 hooks and dead bait (round scads). To date, one blue marlin and one sailfish have been successfully tagged and released. Biological data were collected on the other three sailfish which were retrieved dead.

During the 1994/1995 billfish season, Grenada continued to collect biological data (lower jaw fork length (LJFL), pectoral fork length (PFL), pectoral anal length (PAL), weight and sex) for the ICCAT Programme for Enhanced Research for Billfish. A total of 413 billfish were sampled. Of commercial landings, 273 sailfish, 15 blue marlin, and 33 white marlin were measured. In addition, 5 blue marlin, 6 white marlin, 80 sailfish, and 1 spearfish were sampled (for length, weight and sex) at the Spice Island Billfish Tournament, held in early 1995. In Jamaica, recreational fishers continued their tag and release program for billfish using The Billfish Foundation (TBF) tags. Biological data (length, weight, stomach contents, and maturity) were collected for billfish landed during tournaments.

By means of tagging experiments, a study of the migration patterns and stock structure of blackfin tuna, king mackerel and wahoo is expected to commence in late 1995. Using small open boats, fish will be tagged and released at three locations in the eastern Caribbean.

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Table 1. Commercial landings (mt, rounded to the nearest 0.1 mt when data were sufficiently precise) of large pelagic fish species by some CARICOM countries, 1990 - 1994.

Country	Common Name	Scientific Name	1990	1991	1992	1993	1994	
Barbados	Tuna unsp		87.0	71.0	112.0	167.0	162.0	
	Billfish unsp		102.0	58.0	84.0	99.0	91.0	
	Wahoo	<i>Acanthocybium solandri</i>	51.0	60.0	51.0	91.0	82.0	
	Shark unsp		18.0	19.0	24.0	18.0	22.0	
	Total		258.0	208.0	271.0	375.0	357.0	
Dominica	Yellowfin Tuna	<i>Thunnus albacares</i>	18.0	11.7	22.6	30.2	31.0	
	Skipjack Tuna	<i>Katsuwonus pelamis</i>	60.0	37.8	41.1	23.6	43.0	
	Blackfin Tuna	<i>Thunnus atlanticus</i>	18.7	9.7	13.9	14.8	19.0	
	Wahoo	<i>Acanthocybium solandri</i> & <i>Scomberomorus cavalla</i>	38.3	42.8	59.1	58.6	59.0	
	Total		135.0	102.0	136.7	127.2	152.0	
Grenada	Yellowfin Tuna	<i>Thunnus albacares</i>	530.1	620.2	595.2	857.9	385.0	
	Skipjack Tuna	<i>Katsuwonus pelamis</i>	22.6	25.0	30.1	25.1	11.0	
	Blackfin Tuna	<i>Thunnus atlanticus</i>	293.1	194.8	146.0	252.7	189.0	
	Bigeye Tuna	<i>Thunnus obesus</i>		64.8	25.0	20.1	10.0	
	Mackerel	<i>Scomberomorus spp.</i>	3.3	0.4	0.2	0.7	2.0	
	Wahoo	<i>Acanthocybium solandri</i>	54.1	76.5	104.0	95.7	46.0	
	Atlantic Sailfish	<i>Istiophorus albicans</i>	217.9	315.7	310.0	246.2	151.0	
	Blue Marlin	<i>Makaira nigricans</i>	52.3	63.9	51.8	57.9	52.0	
	Swordfish	<i>Xiphias gladius</i>	0.9	2.0	3.2	13.1		
	Total		1174.3	1363.3	1265.5	1569.4	846.0	
	St Lucia	Yellowfin Tuna	<i>Thunnus albacares</i>	57.6	49.3	57.5	91.7	130.4
		Skipjack Tuna	<i>Katsuwonus pelamis</i>	37.0	51.2	39.3	52.6	86.0
		Blackfin Tuna	<i>Thunnus atlanticus</i>	16.6	14.2	13.4	15.9	81.7
Tuna unsp.			33.9	56.1	44.5	71.8	15.7	
Atlantic Bonito		<i>Sarda sarda</i>	2.7	3.2	2.8	4.2	1.3	
Kingfish		<i>Scomberomorus cavalla</i> & <i>Acanthocybium solandri</i>	55.0	78.6	149.8	141.2	97.6	
Total			202.8	252.6	307.3	377.4	412.7	
St. Vincent and Grenadines	Yellowfin Tuna	<i>Thunnus albacares</i>	19.6	23.9	21.8	65.0	16.0	
	Albacore	<i>Thunnus alalunga</i>				2.0	0.1	
	Skipjack Tuna	<i>Katsuwonus pelamis</i>	29.0	27.4	19.8	65.8	56.0	
	Blackfin Tuna	<i>Thunnus atlanticus</i>	37.9	10.6	6.6	53.4	19.0	
	Bigeye Tuna	<i>Thunnus obesus</i>	0.3	0.0	1.2	3.3	0.1	
	Little Tuna	<i>Euthynnus alleteratus</i>			0.2	1.0		
	Wahoo	<i>Acanthocybium solandri</i>	28.0	32.5	32.9	41.0	28.0	
	Cero Mackerel	<i>Scomberomorus regalis</i>			0.7	0.2	0.2	
	Atlantic Sailfish	<i>Istiophorus albicans</i>	1.8	0.6	4.0	3.7	4.0	
	Blue Marlin	<i>Makaira nigricans</i>	0.4	0.3	1.4	1.7	2.0	
	White Marlin	<i>Tetrapturus albidus</i>			0.1	0.8	0.4	
	Swordfish	<i>Xiphias gladius</i>	3.3	0.0	3.1	22.4	0.1	
	Shark	<i>Carcharhinus spp.</i>				6.4	2.4	
	Total		120.3	95.3	91.8	266.7	128.3	

Table 1. (cont). Commercial landings (mt, rounded to the nearest 0.1 mt when data were sufficiently precise) of large pelagic fish species by some CARICOM countries, 1990 - 1994.

			1990	1991	1992	1993	1994
Trinidad and Tobago	Yellowfin Tuna	<i>Thunnus albacares</i>	302.7	540.1		218.5	
	Skipjack Tuna	<i>Katsuwonus pelamis</i>				2.1	
	Bigeye Tuna	<i>Thunnus obesus</i>	56.7	263.2		257.6	
	Bluefin Tuna	<i>Thunnus thynnus</i>				0	
	Albacore	<i>Thunnus alalunga</i>	1.9			639.1	
	Tunas unsp		3537.9	50.6		347.1	
	Blue Marlin	<i>Makaira nigricans</i>				114.8	
	Black Marlin	<i>Makaira indica</i>	1.8			110.6	
	Marlin unsp		15.6	7.1		0	
	Atlantic Sailfish	<i>Istiophorus albicans</i>	5.6	2.6		55.1	
	Spearfish	<i>Tetrapturus pfluegeri</i>	1.0			62.2	
	Swordfish	<i>Xiphias gladius</i>	65.9	71.0		125.1	
	Kingfish	<i>Scomberomorus cavalla</i>	424.3	656.6		1192.1	
	Carite	<i>Scomberomorus brasiliensis</i>	2470.8	2748.6		2130.0	
	Wahoo	<i>Acanthocybium solandri</i>		117.8			
	Blue Shark	<i>Prionace glauca</i>				58.3	
	Mako Shark	<i>Isurus oxyrinchus, I. paucus</i>				113.5	
Shark unsp					104.2		
Total		6884.2	4457.6		5530.3		

Interpretative Notes:

Blanks signify that no data are available. 'Unsp' means unspecified.

Barbados: Landings of wahoo are mostly *A. solandri*, but also include king mackerel *S. cavalla*. Unknown quantities of frigate tuna (*A. thazard*) are also caught.

Dominica: Landings of skipjack tuna include catches of small tunas such as frigate tuna (*Auxis thazard*) and bullet tuna (*Auxis rochei*). Landings of wahoo also include catches of king mackerel.

Grenada: Prior to 1991, bigeye tuna and blackfin tuna were reported together as blackfin tuna. Grenada Fisheries Division estimates that reported blackfin tuna landings actually comprised 50% Blackfin, 20-25% bigeye and the balance made up of bullet and frigate tunas. Landings recorded as *Scomberomorus spp.* were previously recorded incorrectly as *S. maculatus*.

St. Vincent and the Grenadines: Landings are from Kingstown market only. However, most landings of pelagic fish are made at that port.

Trinidad and Tobago: Two fisheries sectors contribute to the landings recorded above: the industrial fishery and the inshore fishery. The 'Tuna unspecified' category in 1991 and 'Sailfish' in 1992 contain the inshore component only.