

# **Recreational Chartered Fishing Activity in the U.S. Caribbean**

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## **ABSTRACT**

Recreational chartered fishing activity has been increasing in the U.S. Caribbean. Charters were identified from the telephone book, tourism guides, and sports fishing and boating magazines. Most of the information summarized was derived from advertisement and the logbook data of the United States Virgin Islands (USVI). No data from fishing charter operations were available from Puerto Rico (PR). A telephone survey conducted by the Caribbean Fishery Management Council during 2000, aimed at:

- i) Identifying these charter operations for PR and corroborating the information from the USVI,
- ii) Collecting information on the number of potential fishers using the resource,
- iii) Documenting the number of fishing trips per week,
- iv) Identifying the species targeted and caught by the charter operations, and
- v) Establishing the operational costs of the charter operations.

Preliminary results indicated that there were over 35 year-round fishing charter operations in the area comprised of Puerto Rico and the United States Virgin Islands. Although the survey is not completed, 46 of these operations (60 charter boats) have been identified. Most charter operations target the seasonal migrations of pelagic species including marlin, sailfish, dolphin fish, tuna, jacks, mackerels, barracuda, and wahoo. Inshore fishing for bonefish, snook, permit, and tarpon now also includes reef fish. Most of these recreational fisheries do not require anchoring by fishing vessels. It is not known if those charters that advertise for reef fish fishing (groupers and snappers) do or do not anchor their boats.

**KEY WORDS:** Recreational fishing, charters, sportsfishing

## **RESUMEN**

La actividad de la pesca recreacional con botes de alquiler, ha aumentado en el Caribe americano de acuerdo a información obtenida de guías turísticas, telefónicas, revistas de botes y pesca deportiva. La mayor parte de la información sobre las embarcaciones de alquiler se obtuvo de anuncios publicitarios y del diario de

navegación (bitácora) de las Islas Vírgenes Americanas. No se consiguió data alguna en Puerto Rico (PR) sobre las actividades de las embarcaciones de alquiler. Durante el año 2000, el Consejo de Administración Pesquera del Caribe condujo una encuesta telefónica dirigida a:

- i) Identificar las operaciones de alquiler de botes de pesca en PR y corroborar la información de las Islas Vírgenes Americanas (USVI),
- ii) Recopilar información de la cantidad potencial de pescadores que utilizan este recurso,
- iii) El número semanal de viajes de pesca,
- iv) Identificar las especies que persiguen y pescan los operadores de alquiler,
- y
- v) Determinar el costo de las operaciones de alquiler.

Los resultados preliminares indican que en el área que comprende a Puerto Rico y las Islas Vírgenes Americanas había mas de 35 operaciones alquilando durante el año entero. A pesar que la encuesta no se ha completado, (de 46 operaciones de alquiler) 60 botes han sido identificados. La mayoría de éstos negocios de alquiler se enfocan en la temporada migratoria de especies pelágicas que incluyen el pez aguja, pez vela, dorado, atún, jureles, sierra, picúa y peto. La pesca en aguas cercanas a la costa que incluía capturas de macaco, róbalo, pómpano y sábalo, ahora también incluye los peces de arrecife. La mayoría de estas pesquerías recreacionales no requieren anclaje de las embarcaciones. Se desconoce si los botes de alquiler que se anuncian para la pesca de peces de arrecifes (meros y pargos) anclan sus botes o no.

**PALABRAS CLAVE:** Pesca recreacional, operadores de alquiler, pesca deportiva

## INTRODUCTION

Recreational fishing activities, contrary to artisanal commercial fishing activities are not actively and continuously monitored, nor regulated, in the U.S. Caribbean. Among the recreational user groups of marine resources are the free and SCUBA divers, sportfishers, shoreline fishers and the chartered fishing operations.

Management of marine resources is usually exercised over commercial fishing activities in the U.S. Caribbean. This is so because most of the data available to determine the status of stocks and the impacts from fishing on these stocks, and fish habitat, are from the commercial fishing sector. Recreational fishing related activities that have direct and indirect impact over marine resources includes boating, cruising, anchoring of vessels, trawling, and harvesting, among others. Most of the information available from the recreational fishing activities is derived from big game fishing (e.g., fishing tournaments) or shoreline fishing (Adams et al., 1995). Except for tournament data in the USVI, most other data are collected through special or short-term projects.

Chartering in the U.S. Caribbean has been taking place for over 50 years. There has been no continued effort on monitoring the development of the charter fleet.

Although there are a number of studies that inventoried the fleet (names of captains/owners; U.S.V.I. Marine Recreational Services and Facilities Directory, 1986 - 1987, Griffith et al. 1988, Chaparro 1992) and provided information on the clientele of these operations (Chaparro 1992), no detailed description of the local charter operation exists (e.g., effort, size, spatial distribution, operation costs, etc.).

In order to establish a baseline database on the chartered fishing activities, this study focused on a telephone survey of the charter operations in the U.S. Caribbean during 2000. This survey, in addition to identifying and documenting these year-round local operations, aimed at collecting information on:

- i) The number of potential fishers using the resource,
- ii) The number of fishing trips per week,
- iii) The species targeted and caught or released by the charter operations, and
- iv) Operational costs of the charter operations.

#### METHODS

Fishing charter operations were identified from the local yellow pages for Puerto Rico and the U.S. Virgin Islands (St. Thomas, St. John and St. Croix). Local tourist guides (e.g., Que Pasa and Sports Planners (PR), St. Thomas This Week, What to do in the U.S. Virgin Islands, etc.), newspapers, specialized magazines and the Internet were searched for information on charter operations. The local government offices were contacted (e.g., PR Tourism Co., PR Department of Natural and Environmental Resources, USVI Department of Planning and Natural Resources) for information on the chartered fishing activities.

The survey conducted included questions to corroborate the information obtained from the sources mentioned above. This information included name of business and captain, address and phone numbers, type of fishing, seasonality of the target species, type of fishing trips available (four, six, or eight hours per day), name and size of the vessel(s), and cost per trip. In addition, respondents were questioned about the area of fishing, the number of people and fishing lines taken per trip, the number of trips taken per week, and the type of bait used. Additionally, respondents were asked to estimate their operating costs that included fuel per trip, insurance, docking expenses, etc. The answers of the respondents were taken at face value.

The same person conducted the telephone interviews, and each lasted about 20 minutes unless the respondent provided additional comments or requested information. Most respondents have offered partial information only. Calls were made throughout the day since the survey was conducted during the low season.

#### RESULTS

The number of charter boat operations identified in the U.S. Caribbean totaled 46, with 27 in the USVI and 19 in Puerto Rico (Table 1). The number of charter boats identified was 60 since 11 operations have two (2) boats and one has 4 boats that are chartered for fishing. The overall effective response rate based on 46

charter operations identified was 52%, with a response of over 58% from St. Thomas. Chaparro (1992) reported 30 charter boats from St. Thomas (15 in this study), 17 in St. Croix (15 in this study), none for St. John (two in this study), and seven (7) from Puerto Rico (28 in this study). Of these, three, four and one were repeats between 1992 and 2000 for Puerto Rico, St. Thomas, and St. Croix, respectively. This is an indication of the rapid turnover in the charter business. Chaparro (1992) also reported most boats centered in San Juan, PR. In 2000, most charter operations are found on the East coast of Puerto Rico.

The present study only surveyed the year-round local charter fleet, but it is generally known that there are numerous charters and private recreational fishing boats that fish in the U.S. Caribbean during the peak season (June-September) for blue marlin. More than 70 boats have been reported in St. Thomas (Adams et al. 1995).

Most fishing charters are offshore charters, but many with vessels under 35 ft offer both offshore and inshore fishing. Figure 1 shows that the greatest number of boats is less than 35 ft, the average boat size in Puerto Rico being 36 ft (range 16 to 58 ft) and 35 ft in St. Thomas (range 15 to 48 ft).

The number of years in business for these charter operations ranges from one to 49 in Puerto Rico (13 years average) and two to 32 in St. Thomas (16 years average). Typically, the St. Thomas fleet had been one of larger boats and less dedicated to inshore fishing, a trend that seems to be changing but was not analyzed in this study. There was no correlation between the number of years in business and the size of the charter boat for either Puerto Rico or St. Thomas (Figure 2).

The USVI have been monitoring the fishing tournaments since the 1970's and establishing a voluntary log book system for data collection from the recreational fishing sector in the 1990's.

Charter boats operate during half day (four hours in the morning or four hours in the afternoon),  $\frac{3}{4}$  day and full day trips and charge by trip (ranging from US\$85 to US\$1,300) rather than by person. However, inshore trips might charge per person instead of per trip. More information is needed to further define the differences between inshore and offshore fishing trips.

One other objective of the study was to estimate effort and the potential impact on marine resources. Table 2 presents a summary of the estimated annual effort obtained for charter operations. The 60 charter boats identified, if making an average of 180 trips per year [calculated based on the proportion estimated by the owners or on a 50:50 high to slow season proportion by GGM], could be fishing 54,000 lines per year. The average number of lines fished per offshore charter boat was five. No specific information was requested on the percent composition of the catch but most of those interviewed commented on the practice of tagging and releasing the catch. The charter boats are taking an estimate of 43,200 people on fishing trips per year. No information was collected on the expertise of the visiting fishers.

Table 1. Number of charter boats and charter operations identified in the US Caribbean. Response rates are presented as number of answers

	St. Thomas	St. John	St. Croix	Puerto Rico	TOTAL
Number of Charter Boats	15	2	15	28	60
Number of Charter Operators	12	2	13	19	46
Number of answers	7	1	6	10	24
Percent	29.2	4.2	25.0	41.7	
Percent within Island	58.3	50.0	46.2	52.6	52.2
Number of tourists	1,935,300		289,500	3,396,115	
Charter Operators:					
Number boats 1	7	2	13	12	34(74%)
Number boats 2	3		2	6	11(24%)
Number boats 3					
Number boats 4				1	1(2%)
Number of boats dedicated to:					
Inshore	2		1	6	9(15%)
Offshore	5		7	11	23(38%)
Unknown	8	2	7	11	28(47%)

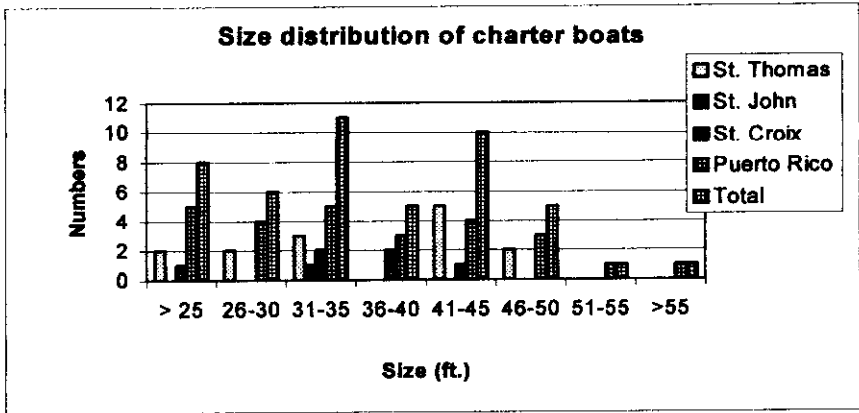


Figure 1. Size distribution of charter boats in Puerto Rico and the U.S. Virgin Islands.

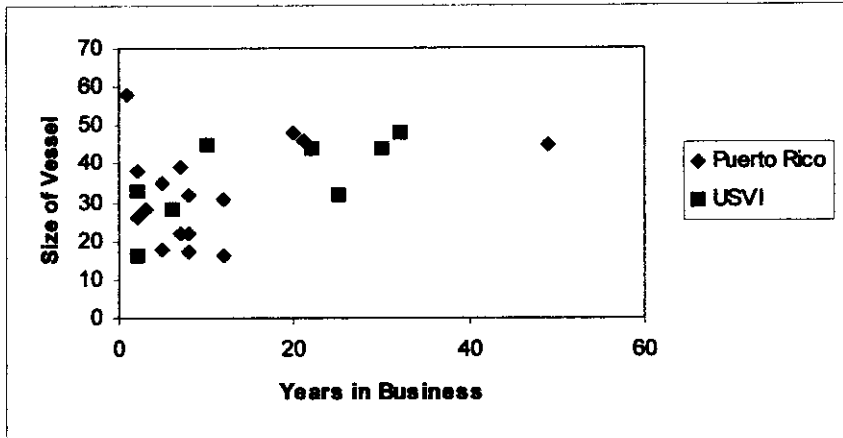


Figure 2. Charter boat size distribution as a variable of years in business.

The catch composition varies seasonally (Table 3) for the various species targeted. Most fishing is still carried out for pelagic species that are identified by common names. Inshore fishing for tarpon, snook, etc. is done per area and season (tourist season) although they are found in the area most of the year. The 'new' species targeted by the charter industry are the reef fish but these are lumped into a snapper/grouper category. Erdman (1959) identified months and areas when and

where there was best fishing for a number of species (over 70 species) of interest to the sport fisher. Adams et al. (1995) and others in the USVI and Puerto Rico have identified the numerous species harvested by recreational fishers. However, very little biological data have been obtained from the species harvested recreationally. Thus, the impact on the marine resources by the harvesting from the recreational sector cannot really be determined as it can be for the pelagic species harvested. However, the information on pelagics has been documented somewhere else (e.g., USVI/DPNR Data).

**Table 2.** Estimated effort in numbers of trips per year and lines fished per year for the charter operations in the US Caribbean

	Annual Average for Fleet		
Average number of trips per vessel per year	180	10800	Trips
Average number of lines fished per vessel per trip	5	54000	Lines Fished
Average number of people per vessel per trip	4	43200	Fishers*
Number of charter boats identified	60	120	Crew

The most difficult subject to approach was that of estimating the operational costs in the charter fishing industry. Table 4 summarizes the amounts, in U.S. dollars, estimated as operational costs for charters in the U.S. Caribbean for boats that range in size from 15 to 58 ft and are making from 1 to 14 trips per week. These estimates have not been weighted, normalized or standardized as of the writing of this paper. The least variable items in the operation costs were (1) insurance, (2) docking expenses (marina and utilities), and (3) the commission for agents.

## DISCUSSION

A database has been established for charter operations in the U.S. Caribbean. A description of the charter operations that compliments those in existence (e.g., Griffith et al. 1988) has been documented and the direction of further investigation established.

The number of visitors to the U.S. Caribbean is estimated at over five million each year but not one percent of the total number of visitors partakes in the charter operations. Perhaps an underutilized business but, considering that most marine fish species are documented as overfished, what direction can be given to the industry? The impact on marine resources from the charter operation sector has not been determined thus caution must be exercised. The survey does not include information on other recreational fishing sectors such as privately owned boats used in recreational fishing, on-shore fishing, and others but offers information on only the chartered fishing operations.





**Table 4.** Estimated (average) operational costs per charter boat in the U.S. Caribbean. (In US dollars, US\$)

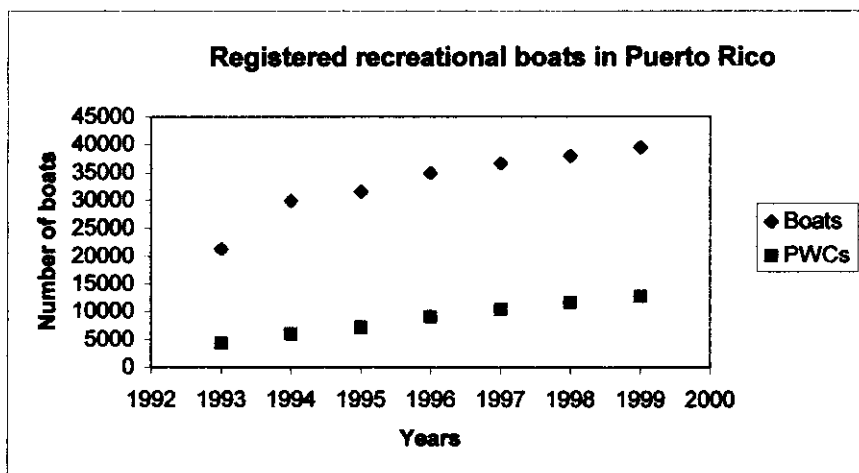
<b>Operation Costs</b>	
Size of Vessel (Ft.)	39
Fuel Per Year	US\$9822
Upkeep of Boat (Maintenance)	US\$2550
Bait	US\$669
Equipment	US\$2000
Insurance	US\$5356
Ice	US\$523
Drinks Water Lunch	US\$2458
Marina	US\$4486
Utilities	US\$350
Tackle	US\$2048
Salaries	US\$18021
Capt	US\$10125
Crew	US\$7598
Estimated Costs	US\$33464
Commission For Agents	15%

The number of recreational fishers in the U.S. Caribbean is unknown since there is no requirement by the local or federal governments for a recreational fishing license. Recreational fishers could, and some do, have a commercial fishing license that would, and does, allow them to sell their catch. No attempt has been made yet to determine the number of fishers that charter or function otherwise as for-hire vessels that also have commercial fishing licenses.

The number of recreational vessels has been increasing (Figure 3) and it is expected that it will continue to increase in the future but no long time monitoring of the fishing activities, with funded analytical capabilities, is yet in place in the U.S. Caribbean. Comments from those interviewed also included the need to manage, not necessarily fishing activities or practices but the increasing number of people at sea, that is boaters, swimmers, walkers on reefs, etc. In addition, some commented on the need to conserve special places where fish aggregate as juveniles or for reproductive purposes – in other words protection of essential fish habitat (EFH) and most specifically habitat areas of particular concern (Magnuson-Stevens Act, as amended). The Magnuson-Stevens Act, as amended, requires that EFH be defined for each fish species and that both fishing and non-fishing impacts on habitat and stocks be described. It also requires that fishing communities or communities affected by fishing activities be identified and described. Most of the information

available is on the commercial fishing sector. Questions regarding the number, distribution and activity patterns, and the overall impact on fisheries and EFH by the recreational fishing activity are still unanswered.

One fishing charter boat was found to carry 7 to 10 people per fishing trip. There are no head boats identified as such yet in the area but the possibility of these increasing in number is real.



**Figure 3.** Registered boats in Puerto Rico between 1993 and 1999. PWCs are personal water crafts or jet skies. Data from PRDNER, Ramon Martinez.

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