

Recreational For-Hire Sector Fishing in the Gulf of Mexico: Fishery Management Issues

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ABSTRACT

The Gulf of Mexico fishery resources are a source of economic, biological, nutritional and recreational wealth. An important sub-segment of sportfishing demand is the recreational fo-hire vessel fleet, commonly called charter and party boats. Understanding the distribution, characteristics, and species targeting of charter/party boat operations gives resource allocation decision makers important information about demand. In addition, a more solid basis for justifying differential restrictions (i.e. bag limits, size restrictions, etc.) can be established.

Charter and party boat fleets operate in the recreational fishing business sector, the tourism sector, and some operate in the commercial fishing sector, simultaneously. They provide an affordable, movable platform for sport fishermen to access Gulf and Caribbean fisheries. This builds support and appreciation for fisheries resources among the public. On the other hand, advances in technology and the number of boats (each with multiple fishermen) increase demand, particularly in offshore areas, and can aggravate stock depletion problems. Empirical evidence suggests substantial growth in this industry. According to the Marine Recreational Fisheries Statistics Survey data, charter fishing trips have grown from 816,000 in 1990 to 1,631,000 in 1995 for a 128% increase in the Gulf and South Atlantic states.

According to our 1988 study, the primary fisheries involved in the charter/party boat fisheries are grouper, snapper, king mackerel, dolphin, amberjack, spotted seatrout, and red drum. However, results indicated that some effort was directed at 23 different species, virtually every sportfish available. Regional species targeting differences are discussed in this paper. One current unknown factor, is the size and location of the for-hire sector based in Mexico; number of trips and catch data. The author discuss plans to update information on this changing industry with a ten-year update through captain interviews in 1998.

KEY WORDS: Recreational fishing, Gulf of Mexico, fisheries management

INTRODUCTION

The Gulf of Mexico fishery resources are a source of economic, biological, nutritional and recreational wealth. The harvest of these resources has created a demand that is apparently exceeding the capacity of the Gulf ecosystem to

sustain. In response to decreased fishing resource stock levels, the Gulf of Mexico and South Atlantic Fisheries Management Councils and the Florida Marine Fisheries Commission and other state agencies have established restrictions in an attempt to manage the problem.

The restrictions vary depending on the species and demand segment. In general, the demand segment is divided into commercial and sportfishing sectors. The sportfishing or recreational sector can be further subdivided into categories such as surf and pier fishermen, bay fishermen, boat fishermen, etc.. One important segment of sportfishing demand is the recreational paying passenger vessel fleet, commonly called charter and party boats. Bell *et al.* (1982) reported annual expenditures by tourists and residents of \$178 million for party and charter boat services in Florida. Charter boats are commonly defined as boats for hire carrying six or less passengers while party boats carry seven or more passengers.

In 1978, Browder *et al.* completed a study of recreational paying passenger boats docked on the Florida Gulf Coast. In 1987, Ditton *et al.* (1988) conducted a charter/party boat study of the central and western Gulf states. The following year, Holland and Milon conducted a study of the structure and economics of the charter/party boat fleet of the Gulf Coast of Florida (Holland and Milon, 1989). These last two studies were based on in-person interviews with boat owner/operators and were compatible with each other and were more in-depth than the Browder *et al.* study in geographic coverage, in the focus on species targeted and business economics. Most of the data to be summarized in this paper is from these two most recent studies.

REGIONAL DIFFERENCES IN POPULATION OF FOR-HIRE BOATS

Understanding the distribution of charter/party boat operations gives resource allocation decision makers important information about demand. In addition, a more solid basis for justifying differential restrictions (i.e., bag limits, size restrictions and closed seasons) can be established. For example, limits of two king mackerel in possession per trip for recreational fishermen were modified to three king mackerel per trip (exclusive of captain and crew) for passengers on licensed charter vessels. In another example, fishermen on licensed recreational party boats were exempted from the minimum size limits (<13 inches) for red snapper. It is clear that a good understanding of the rationale and impacts of such management decisions is based on an accurate assessment of demand parameters of the charter/party fleet. Figure 1 portrays the relative differences of charter boat distribution across the U.S. Gulf of Mexico.

GROWTH IN DEMAND

The charter and party boat fleets play an important role in utilizing fishery

resources. On one hand, they offer a valuable service to clients by providing an affordable, movable platform for sport fishermen to utilize in accessing Gulf and South Atlantic fisheries. Many anglers do not have the resources to purchase an off-shore capable boat, and charter/party boats provide access to an otherwise inaccessible resource. This helps build support and appreciation for such resources among the public. On the other hand, advances in technology and the number of boats (each with multiple fishermen) increase demand, particularly in offshore areas, and can aggravate stock depletion problems.

Since charter and party boats are businesses involving large investments by captains and/or owners, they usually make an effort to be visible to the public through location and/or advertising. These attributes plus the business orientation make this segment of recreational demand easier to manage than less permanent sectors (e.g., bay fishermen or surf fishermen). However, there is considerable turnover and migration of the fleet (Ditton and Loomis, 1985) and periodic updating and revising of information summaries are necessary. In addition, rapid growth in the coastal population of the Southeast and increases in winter residents and tourists (Florida Department of Commerce, 1995) are creating new areas of charter/party boat activity. With coastal development approaching the saturation point in many coastal areas, there is increased potential for greater growth in rural coastal zones and underdeveloped countries and continued growth in the number of party and charter services.

The empirical record also suggests growth in this industry. According to the Marine Recreational Fisheries Statistics Survey data, charter fishing trips have grown from 816,000 in 1990 to 1,631,000 in 1995 for a 128% increase in the Gulf and South Atlantic states (Table 1). These are the number of trips reported in the most recent MRFSS tables.

In addition to these trip records, the biological evidence suggest a substantial increase in the recreational catch of red drum, red snapper and king mackerel, with private boat and shore based rates virtually flat and charter/party boat catches increasing annually. Figures 2 and 3 present two charts that were prepared by Gerry Gray of NMFS on recent trends in charter boat catch estimates for a variety of species. Clearly, the for-hire industry is accounting for a larger catch in the Gulf of Mexico, at least.

REGIONAL DIFFERENCES IN SPECIES TARGETING OF FOR-HIRE BOATS

The primary fisheries involved in the USGOM charter/party boat fisheries are: grouper, snapper, king mackerel, dolphin, amberjack, spotted seatrout, and red drum. However, survey results indicated that some effort was directed at 23 different species, virtually every sportfish available. However, there was variation in the number and type of species targeted by state (Table 2). Texas

boat captains targeted 78% of their effort on two species (red drum and spotted seatrout); Louisiana captains targeted 95% of their effort on three species (red drum, spotted seatrout and snapper); while Florida based captains targeted 77% of their effort on seven species (Grouper, Snapper, King Mackerel, Dolphinfish, Amberjack, Shark, and Sailfish).

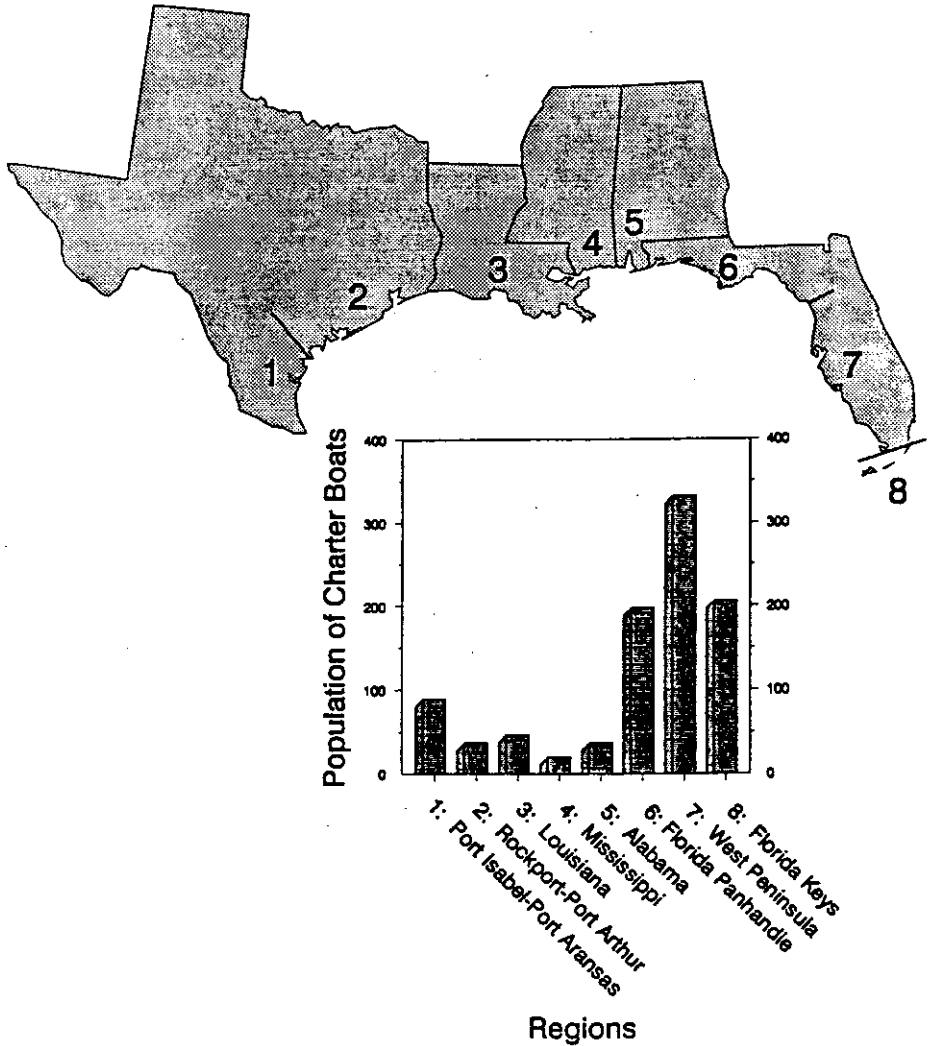


Figure 1. Regional distribution of charter boats in the U.S. Gulf of Mexico

Table 1. Marine Recreational Fisheries Statistics Survey data of the number of charter boat trips in Gulf and South Atlantic state and federal waters

Year	Number of trips
1995	1,864,103
1994	1,631,238
1992	964,030
1991	889,402
1990	816,486

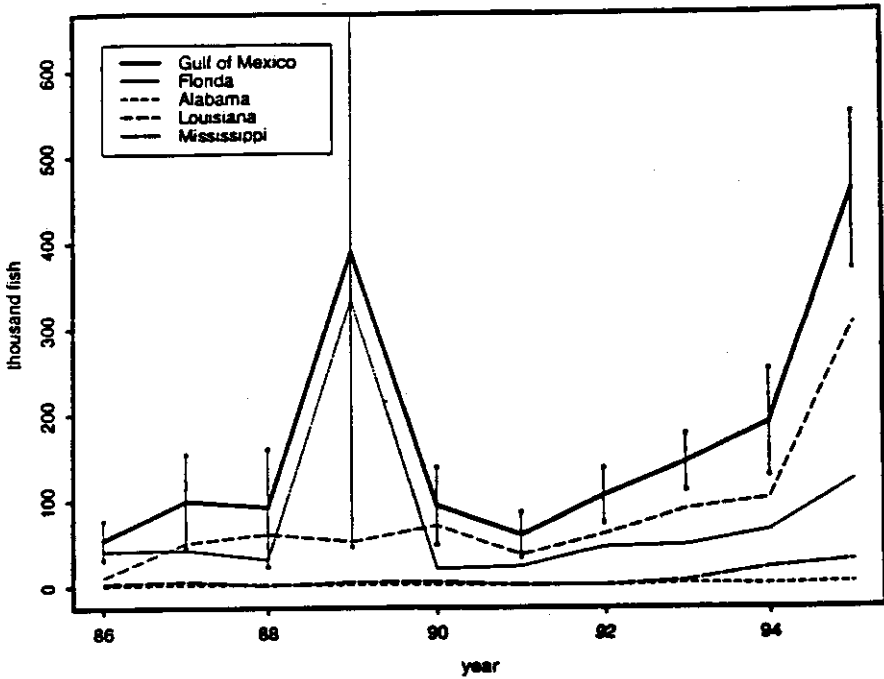


Figure 2. MRFSS red drum total catch (including releases for the Gulf of Mexico charter mode, 1986 - 1995). Vertical bars indicate 95% confidence intervals.

In addition to fishery resource issues, there is the additional consideration of fairness and equity to the charter/party industry. Resource allocations have an impact on the for-hire boat fishing business. Clearly, management regulations that affect certain species (spotted seatrout and snapper, for example) will have a differential impact across the northern Gulf. It is important to consider the impact of fishery management decisions on regional operators as well as the industry

as a whole. This is required for federal jurisdiction waters under the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801-1882). The Regulatory Flexibility Act (05 U.S.C. 601-612) also calls for the consideration of the impact of regulations on targeted businesses.

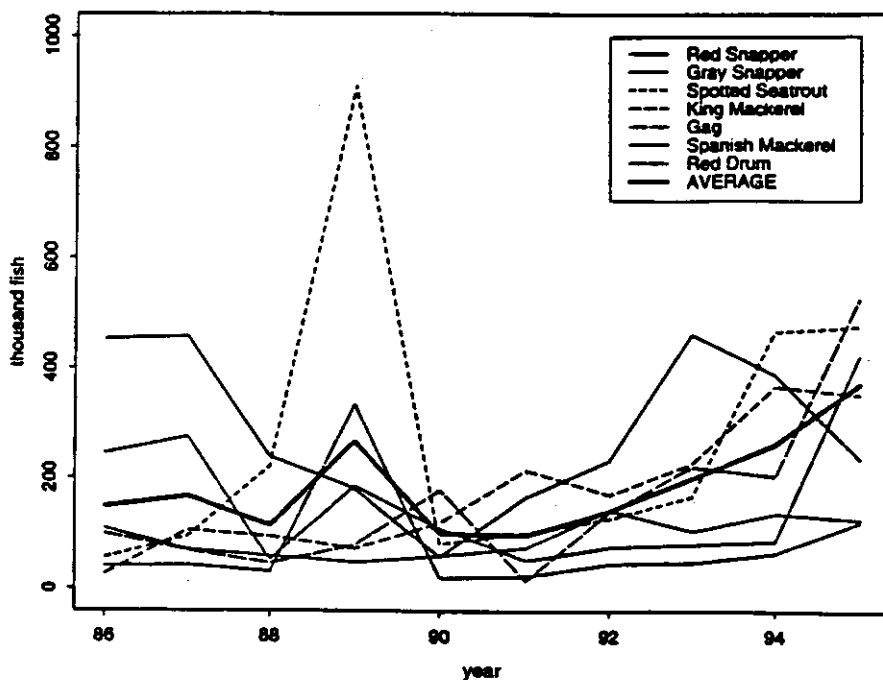


Figure 3. MRFSS total catch (including releases) of selected species for the West Florida charter mode, 1986 - 1995. Vertical bars indicate 95% confidence intervals.

Table 2. Estimated effort units for species targeted by charter boats by state and region. Error units were calculated by multiplying the population of charter boats in each state by the mean percent time targeted for each species by the sample of charter boat captains in each state.

Species	Texas		Louisiana		Mississippi		Alabama		Florida		U.S. Gulf	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Amberjack	2 ¹	0.1	5	0.2	4	0.6	82	4.0	4,150	8.8	4,243	7.5
Barracuda	2	0.1	0	0.0	2	0.3	<1	0.0	1,224	2.6	1,229	2.2
Blackfin tuna	1	0.0	2	0.1	0	0.5	1	0.1	767	1.6	771	1.4
Blue marlin	13	0.3	0	0.0	0	0.0	<1	0.0	1,086	2.3	1,100	1.9
Bluefin tuna	1	0.0	0	0.0	3	0.5	0	0.0	17	0.1	21	<0.1
Bluefish	0	0.0	<1	0.0	27	4.3	3	0.1	224	0.5	255	0.5
Bonito	7	0.2	0	0.0	16	2.5	8	0.4	1,828	3.9	1,859	3.3
Cobia	4	0.1	36	2.0	33	5.2	29	1.4	1,420	3.0	1,522	2.7
Dolphin	18	0.5	11	0.5	16	2.5	6	0.3	4,990	10.5	5,041	9.0
Flounder	0	0.0	0	0.0	0	0.0	<1	0.0	125	0.3	126	0.2
Grouper	18	0.5	0	0.0	18	2.9	75	3.7	9,313	19.7	9,424	16.8
King mackerel	531	13.3	44	2.0	158	25.0	303	15.0	5,552	11.8	6,588	11.7
Ladyfish	0	0.0	0	0.0	5	0.8	2	0.1	134	0.3	141	0.3
Red drum	1,003	25.0	476	21.0	62	9.8	22	1.0	154	0.3	1,717	3.0
Sailfish	7	0.2	0	0.0	6	1.0	2	0.1	2,679	5.7	2,694	4.8
Shark	5	0.1	4	0.2	37	5.9	2	0.1	2,694	5.7	2,742	4.9
Snapper	249	6.2	312	14.0	90	14.3	1,462	71.0	6,856	14.5	8,969	16.0
Spanish mackerel	<1	0.0	0	0.0	124	19.7	35	1.7	1,610	3.4	1,770	3.2
Spotted seatrout	2,126	53.1	1,344	60.0	15	2.4	15	0.7	257	0.5	3,757	6.7
Swordfish	<1	0.0	0	0.0	3	0.5	<1	0.0	35	<0.1	40	0.1
Wahoo	3	0.1	0	0.0	2	0.3	1	0.1	1,069	2.3	1,075	1.9
White marlin	8	0.2	0	0.0	6	1.0	2	0.1	862	1.8	878	1.5
Yellowfin tuna	1	0.0	0	0.0	3	0.5	<1	0.0	162	0.3	167	0.3
Total	3,999	100.0	2,234	100.0	630	100.0	2,050	100.0	47,208	100.0	56,129	100.0

UNKNOWN MEXICAN DEMAND

An important aspect of regional species targeting data, is the unknown demand on fisheries resources from boats based in Mexico. The size of the commercial, recreational and for-hire sectors of the Mexican fisheries is unknown to this researcher and to most (all?) U.S. Based fisheries scientists. In addition, the targeting preferences of Mexican fishers is unknown. This is especially important in migratory species, such as King and Spanish Mackerel, where effort limitations are in place in United States waters, in attempts to restore the stocks. It could be the case, though, that sacrifices resulting in stock increases on the part of US fisheries, are being shifted to Mexico when the fish are harvested in Mexican waters, thus nullifying any gains in the stock. It should be emphasized that there is no data to conclude this but there is a need to learn more about Mexican fisheries, and, in this case, to learn more about charter and party boat operations based in Mexican ports.

FISHERIES CONSERVATION ACT OF 1996

The revised Magnuson Act has potentially set the stage for substantially more restrictions on fisheries to speed up the recovery of stocks. This is still being worked out at the regulatory stage and interpretations of some of the new provisions in the Act may need to be clarified by the courts in coming years. In particular, new language [Sect 304(e)(4)] specifies:

(4) For a fishery that is overfished, any fishery management plan . . . for such fishery shall-- (A) specify a time period for ending overfishing and rebuilding the fishery that shall--(i) be as short as possible, taking into account the status in the biology of any overstocked stocks of fish, the needs of fishing communities,.....and (ii) not exceed 10 years except in cases where the biology of the stock of fish, other environmental conditions, . . . or international agreement dictates otherwise.

The new act "changes the goalpost" to a stricter standard when action must be taken. In ongoing discussions of how to bring the Reef Fish FMP into compliance, it appears that a substantial reduction in bycatch by shrimpers through the use of Bycatch Reduction Devices (BRD's), and a reduction in allocation to both commercial and recreational sectors will be needed. Given that most of the growth in recreational demand has been occurring in the for-hire sector, it appears likely that this mode will be subjected to further restrictions, possibly longer closed seasons. This same scenario seems likely for King Mackerel, also.

1998 USGOM AND SOUTH ATLANTIC FOR-HIRE SECTOR STUDY

A replication and extension of these studies will provide updated information and allow some comparison to evaluate the growth (decline) of the industry over a twenty year period, with this being the third ten year data point in the series. The proposed project for Florida and the Southeast states will be consistent and compatible with the content and format used for the other Gulf states and will compliment that report. The PI's for both projects will use almost identical surveys and will work together to provide consistent results across all the states. Information for the entire Gulf would then be compatible. Consistency of data sets should prove valuable in managing the Gulf ecosystem as a whole and demonstrate that the Gulf States Marine Fisheries Commission supports research that bridges the usual complications of individual studies that cannot be compared because of inconsistent methods or incompatible response categories.

Results from the charter/party boat survey will also be used to estimate the economic impacts of these recreational fishing expenditures on the target state's economy. This impact analysis will provide information about sales, earnings, and employment impacts that can be considered in regulatory impact analyses of proposed regulations. This analysis will be consistent with the information needs created by the new National Standard 8 in the Sustainable Fisheries Act which requires that economic impacts from regulations be considered and minimized to the extent practicable. The economic impact analysis will use the US Bureau of Economic Analysis "Regional Industrial Multiplier System" (RIMS) for each of the four states.

This research will provide a regional data base of information on the charter/party boat fleet in the Eastern Gulf and South Atlantic that will assist regulatory efforts of state and federal agencies. Species effort and boat distribution information should assist biologist and ecologist in estimating demand. Industry financial and business information should assist state and federal rulemaking bodies in understanding the impact of their actions on the individual captain and the industry. A comparison with past studies should identify trends which may assist the work of planning agencies. Finally, a body of information will be available to support and validate state and federal decisions should they be challenged. Clearly, this information should improve the conservation and management of a variety of species that are being targeted at an increasing rate by the for-hire sector. A better understanding of this sector should also result in more effective long-term utilization of sportfish species, which will produce social values both in the economic impact of these (mostly) small businesses and the provision of valued recreational experiences to over a million anglers annually in the southeast United States.

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