

Overview of Puerto Rico's Small-Scale Fisheries Statistics: 1994 - 1997

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ABSTRACT

A total of 13,936,420 pounds (6,322 metric tons) of fish and shellfish were reported in Puerto Rico during 1994-97. The mentioned landings have a market value of approximately \$27,407,302. The most important fish group, in terms of percentage of total pounds landed (fish and shellfish), for 1994-97, was the silk snapper (mainly *Lutjanus vivanus* and *Etelis oculatus*) 9%, yellowtail snapper (*Ocyurus chrysurus*) 7%, lane snapper (*Lutjanus synagris*) 7%, mackerel species (*Scomberomorus cavalla* and *Scomberomorus regalis*) 5%, various species of grunts mainly the white grunt (*Haemulon plumieri*) 5%, dolphinfish (*Coryphaena hippurus*) 4%, various species of tuna 4%, various species of grouper, principally red hinds (*Epinephelus guttatus*), reported 4%, various species of parrotfish 3%, and various species of trunkfish 2%. The most important of the shellfish species were the spiny lobster (*Panulirus argus*) 7% of total reported landings, and the queen conch (*Strombus gigas*) 6%.

The gear type which accounted for the highest percentage of landings by weight of the total catch during 1994-97, were lines (hand line, troll line, long line and rod and line) with 40%. Lines were followed by traps (fish pot and lobster pot) with 24%, nets (beach seine trammel net, gill net and cast net) with 21% and diving (skin and SCUBA) with 14%. Other gears were < 1% of the total landings reported.

Highlights of the biostatistical data for most caught species in Puerto Rico's fishery will be discussed.

KEY WORDS: Biostatistical data, commercial fishery statistics, Puerto Rico

INTRODUCTION

The Fisheries Research Laboratory (FRL) of the Puerto Rico Department of Natural and Environmental Resources (DNER) monitors the commercial landings of fish and shellfish in Puerto Rico. The Fisheries Statistics Program (FSP) was implemented in 1967 under the Commercial Fisheries Research and Development Act of 1964 (PL 88-309) to collect data on the commercial fishery. Currently, this project is supported by the NOAA/National Marine Fisheries Service (NMFS) through the State/Federal Cooperative and Interjurisdictional Fisheries Programs and the DNER.

The objective of the Puerto Rico Fisheries Statistics Program is to

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maintain reporting services on the commercial finfish and shellfish resources of Puerto Rico, as well as manage and disseminate the fisheries statistics through coordination of activities between NMFS, FRL/DNER and other interested groups. The principal goals of this program are:

- i) Collect landings data from the island of Puerto Rico ensuring coverage of all coastal municipalities and their major fishing centers.
- ii) Determine the total weight of principal finfish and shellfish landed in Puerto Rico each month.
- iii) Determine the ex-vessel value of principal finfish and shellfish species landed in Puerto Rico each month.
- iv) Manage, correct, evaluate, summarize data and prepare semiannual and annual performance reports.
- v) Collect and analyze biostatistical data of the Puerto Rico's commercial fishery.

PROCEDURES

Commercial Landings Data

Commercial fishery landings data were collected from Puerto Rico's fishermen, fish buyers and fishing associations, whom voluntarily cooperate with the FSP. Five port agents visited the 42 coastal municipalities including the islands of Vieques and Culebra, and the 88 identified fishing centers. Port agents worked in the data collection from January 1994 - December 1997.

Efforts were made to collect the following data: fishing date, name of fish buyer, fisherman and/or helper (to avoid data duplication), municipality; fishing center (municipality landing area); number of trips; gear type; fishing effort (hours spent fishing); weight in pounds by species or taxonomic family; market value to the fisherman (price in U.S. dollars/pound); maximum and minimum fishing depth and fishing area. Trip tickets were completed using species common names and identification was possible by using an amended version of the bilingual technical report "Common Names of Fishes in Puerto Rico" (Erdman 1987). A numerical system of species identification was developed to correspond with species codes used in Erdman's publication. Fishermen usually landed fishes in the round (not eviscerated), excepting deepwater snapper and large grouper that they usually landed gilled and gutted. Lobster, oyster and octopus were also landed in the round, and conch weights included meat only. Land crab statistics were reported in number of dozens with each dozen assumed to produce 1 lb. of meat. Some landings were reported as one of four classes of fish (first, second, third and "trash" fish) reflecting their market value: "trash" fish are perceived to have little or no market value. Classification varied somewhat by region but the following descriptions were used to characterize

each class broadly: first class fish included large snappers, grouper, grunt, trunkfish and hogfish; second class included small snapper and grouper, parrotfish, goatfish, and triggerfish; third class included smaller individuals of second class fish and large squirrelfish. The "trashfish" category included butterflyfish, angelfish, surgeonfish, small squirrelfish and small fishes of a large number of species (Matos-Caraballo and Sadovy 1990).

Catch per unit of effort (CPUE) was evaluated for landings data by calculation of total pounds per trip, making a subsample by month, using only those landings trip tickets that clearly indicated a single trip.

Landings data was entered MS-DOS computer, using DBASE III+, checked against the original landing trip tickets, corrected and analyzed using DBASE III+, Microsoft FoxPro, Lotus 123 and Microsoft Excel. All data presented in this report are raw data. As in previous years (1988-97) a correction factor was used in calculations to correct for under-reporting. The correction factor was expressed as the percentage of fishermen that regularly cooperated with statistics divided by the total number of active fishermen in the Island of Puerto Rico. A total of 1,758 commercial fishermen were active during 1994-97 (Matos-Caraballo 1996). The correction factor for 1994 was 64%, for 1995 and 1996 was 71% and for 1997 was 78%. Correction factors before 1989 are discussed in Matos-Caraballo and Sadovy (1990; 1991) and Matos-Caraballo (1992; 1993; 1995).

Commercial Biostatistical Data

Biostatistical data of finfish and spiny lobster were collected by port agents. Each individual was identified by species to determine catch composition. Finfishes were measured in fork length (FL) and spiny lobster in carapace length (CL), both in millimeters (mm), and weighed in grams. Data were recorded on data sheets form. The form was designed to facilitate entry and processing of effort data. Biostatistical data were entered in Trip Interview Program (TIP) developed by NMFS Southeast Fishery Science Center. Later, the data stored in TIP was converted to FoxPro and analyzed using Microsoft Excel. The data collected include date, name of fisherman, fishing area, depth, gear, species, length, weight and effort by gear type. When possible, sex and gonad stage were visually inspected

RESULTS

Commercial Landings Data

In Puerto Rico during 1994, it was estimated that a total of 4,421,253 pounds of fish and shellfish were landed, with a market value of \$8,906,631 (using the correction factor of 71%). During 1995, it was estimated that a total of 5,223,942 pounds of fish and shellfish were landed, with a market value of

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\$10,186,687 (using the correction factor of 71%). For 1996, it was estimated that a total of 5,094,421 pounds of fish and shellfish were landed, with a value of \$9,068,069 (using the correction factor of 71%). In 1997, it was estimated that a total of 4,994,846 pounds of fish and shellfish were landed, with a value of \$9,140,568 (using the correction factor of 78%). The correction factor of 78% of total fishermen cooperating with the Program in 1997, is the highest since 1988 when 56% of fishermen cooperated.

Reported data show that from January-December 1994, a total of 2,714,402 pounds were reported, in 1995 a total of 3,708,999 pounds were reported, for 1996 a total of 3,617,039 pounds and for 1997 a total of 3,895,980 pounds (Table 1).

A total of 23,882 trip tickets was collected during 1994, 39,141 throughout 1995, 38,280 for 1996 and 38,470 for 1997. Landings were principally comprised by six species of shellfish and 43 groups of species or families of finfish, although a total of 151 finfish groups and/or species and 10 shellfish species were reported by fishermen.

The most important fish group, in terms of percentage of total pounds landed (fish and shellfish), for 1994-97, were the silk snapper *Lutjanus vivanus* (few fishermen reported *Etelis oculatus* as silk snapper) 9%, yellowtail snapper (*Ocyurus chrysurus*) 7%, lane snapper (*Lutjanus synagris*) 7%, mackerel species (*Scomberomorus cavalla* and *Scomberomorus regalis*) 5%, various species of grunts mainly the white grunt (*Haemulon plumieri*) 5%, dolphinfish (*Coryphaena hippurus*) 4%, various species of tuna 4%, various species of grouper, principally red hinds (*Epinephelus guttatus*), reported 4%, various species of parrotfish 3%, and various species of trunkfish 2% (Table 1). The most important of the shellfish species were the spiny lobster (*Panulirus argus*) 7% of total reported landings, and the queen conch (*Strombus gigas*) 6% (Table 1).

Several fish and shellfish species that in the past were usually discarded by fishermen, have gained commercial importance. These species did not have market value years ago, now are easily sold at reasonable prices. For example Table 1 shows that the squirrelfish (e.g. *Holocentrus ascensionis* and *H. rufus*) was sold in 1997 at an average price of approximately \$1.21 per pound. Shellfish species in the same situation are marine crabs *Carpilius corallinus* and *Mythrax spp.* On the other hand *Acanthurus spp.*, *Holocanthus ciliaris*, *Pomacanthus arcuatus*, and *P. paru* are fished in the municipality island of Vieques, to be sold in the market of Saint Croix, USVI.

During 1994-97, prices varied markedly by municipality and by species (Tables 2). For example, in 1995, the lowest average price per pound for fish and shellfish was obtained on the east coast, in the municipality of Maunabo at \$0.97, and the highest average price was obtained in the south coast, in the municipality of Peñuelas with \$2.99/pound in 1994 (Table 2). The most produc-

tive of the 42 municipalities during 1994-97, was Cabo Rojo accounting for 22% of the total landings, by weight (Tables 2). The west coast, reported 38% of the total weight, being the most productive, followed by the south, 31%, the east, 19% and the north, 12% (Tables 2).

The gear types (as defined in Matos-Caraballo and Torres-Rosado, 1989), which accounted for the highest percentage of landings, by weight during 1994-97, were lines (hand line, troll line, long line and rod and line together) taking 40% (5,611,540 pounds) of the total catch (Tables 3-6). Lines were followed by traps (fish trap and lobster trap) taking 24% (3,291,559 pounds) of the total reported catch (Tables 3-6). Traps were followed by nets (beach seine, gill net, cast net and trammel net) that accounted for 21% (2,985,183 pounds) of the total reported catch (Tables 3-6). Nets were followed by diving (skin and SCUBA), this gear class fished 14% (1,984,849 pounds) of the total reported catch (Tables 3-6). The gears by hand and land crab trap accounted for less than 1% (63,292 pounds) of total reported landings (Tables 3-6).

From a total of 115,891 trip tickets collected during 1995-97, approximately 79% clearly indicated that the catch referred to a single fishing trip (number of trips = 1). A subsample of these data by month was made. Fishing trips are generally of a half-day duration. The CPUE for landings was 78 pounds per trip (ppt) in 1994, 80 ppt in 1995, 63 ppt in 1996, and 72 ppt in 1997.

Commercial Biostatistical Data

A total of 454 complete samples and 726 incomplete samples of biostatistical data were taken during 1994-97. A total of 25,198 finfish individuals and 2,770 spiny lobsters were measured and weighed during 1994-97. Sex determination of fishes in the field has been difficult due to the reluctance of fishermen to permit this activity, and the general limitation in available time for measuring samples, and difficulties in assessing any but the ripest individuals, for sex. However, it was attempted to collect a minimum of 25 samples of gonads monthly during 1996-97, for *Ocyurus chrysurus*, *Lutjanus synagris*, *Sparisoma chrysopterum* and *Sparisoma viride*. The success of this effort contributed to determine the minimum size of sexual maturation (MSSM) for the mentioned species. *Ocyurus chrysurus* females have an MSSM of 248 mm fork length (FL), males have 224mm FL (Figuerola et al. in press). *Lutjanus synagris* females have an MSSM of 185mm FL and males have 147 mm FL (Figuerola, et. al. in press). *Sparisoma chrysopterum* and *Sparisoma viride* are protogenic monandric hermaphrodites, thus they reproduce first as females. The MSSM of the *S. chrysopterum* females was 235mm FL and for *S. viride* females was 205 mm FL (Figuerola, et. al. in press).

The species most frequently measured from 1995-97 were *Ocyurus*

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chrysurus, *Haemulon plumieri*, *Lutjanus synagris*, *Panulirus argus*, *Epinephelus fulvus*, *Epinephelus guttatus*, *Sparisoma chrysopterum*, *Lutjanus vivanus*, *Sparisoma viride*, *Scomberomorus cavalla*, and *Mycteroperca tigris*. *M. tigris* is heavily fished during their aggregation period. This event occurs in Vieques Island, approximately during the full moon of February and March each year. Personnel of the Statistics Program collect the data, but this species is not a common component of the Puerto Rico's catch composition.

Figuerola et al. (in press) indicated that *Ocyurus chrysurus* females reach MSSM at around 248mm FL and males at 224mm FL. During 1994-97, 10% of *O. chrysurus* individuals were taken below 224mm FL.

Panulirus argus has been protected under federal and local government management plans, for approximately the last 13 years. These management plans prohibit the capture and/or possession of *P. argus* below 89mm (3.5 inches) of carapace length. During 1994-97, approximately 36% of the total individuals sampled by FSP were taken below the minimum legal size (MLS). For the same period 17% of the *P. argus* males and 17% of the females were taken before reaching the MLS.

Epinephelus guttatus is the most abundant grouper species reported in Puerto Rico. Sadovy et al. (1994) studied *E. guttatus* from 1987-92, reporting that MSSM is 215mm FL. *E. guttatus* taken below 215mm FL, were 6% of the biostatistical samples during 1994-97.

Figuerola (1991) reported that *Lutjanus vivanus* females reach MMS at 410mm FL. Biostatistics data of 1994-97 show that approximately 99% of total individuals of *L. vivanus* (males and females) were taken below the MMS of 410mm.

DISCUSSION

Commercial Landings Data

The most reported groups by weight in the commercial fisheries landings for 1994-97, showed that snappers, grunts, groupers, parrotfishes, mackerels, dolphinfish and trunkfishes. Reported commercial landings data reported have been around two millions pounds per year from 1987-94 (Matos-Caraballo, in press). Since 1995, 96 and 97, an increase has been observed in the number of fishermen that cooperated with the FSP, resulting in 3.7, 3.6 and 3.8 millions pounds reported respectively. Approximately a total of 400 more commercial fishermen cooperated with FSP during 1997 than 1994. One possible reason to explain the increased landings reported might be due to an increase in the number of fishermen cooperated with the FSP during 1995-97. This increase in participation probably occurred because the PRDNER and the Puerto Rico Department of Agriculture have provided economical help to fishermen who cooperate on a regular basis to the FSP. Usually a certification from FSP is

required. When we compare the landings reported in late 70's and early 80's (around 5 - 7 million pounds), with the reported landings of 1987-97, an indication of overfishing is observed (Figure 1).

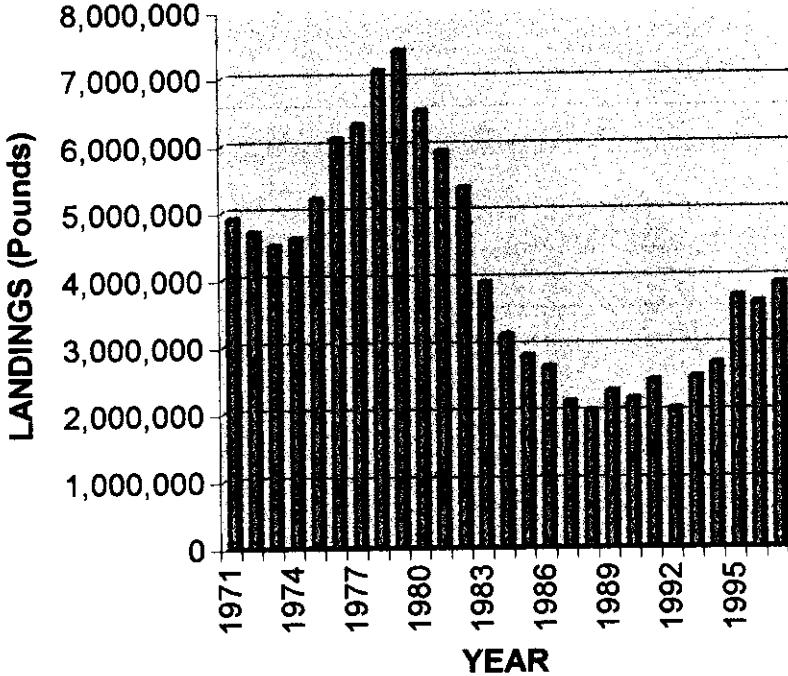


Figure 1. Total landings of fish and shellfish reported in Puerto Rico during 1971-97.

Another symptom of overfishing was observed in several species discarded by fishermen in the past, and now have become commercial species (e.g. *Holocentrus ascensionis* and *H. rufus* and *Acanthurus spp.*). These species are now marketable due to the decrease in landings of preferred species, and an increase in the demand of more fresh fish products.

The fish market of Saint Croix USVI, purchase the Vieques landings of *Acanthurus spp.*, *Holocentrus ciliaris*, *Pomacanthus. arcuatus*, *P. paru* and many juvenile reef fish species. The mentioned species are subject to severe fishing pressure.

The municipality of Cabo Rojo and the west coast have continued to be the most productive municipality and coast respectively since 1972 (Weiler and Suárez-Caabro 1980, Collazo and Calderón 1988, Matos-Caraballo and Sadovy 1990 and 1991, Matos-Caraballo 1993, 1995, 1997). However, the west coast

has shown a tendency to decrease the percentage of total landings reported from 52% in 1983 to 37% in 1997 (Figure 2). Cabo Rojo shows the same tendency (Figure 2). Biostatistical data of FSP indicate that the fishing resources in the west are overfished (Matos-Caraballo, in press). The mentioned tendencies are evidence of the need of effective management and enforcement to preserve the fishing resources of Puerto Rico.

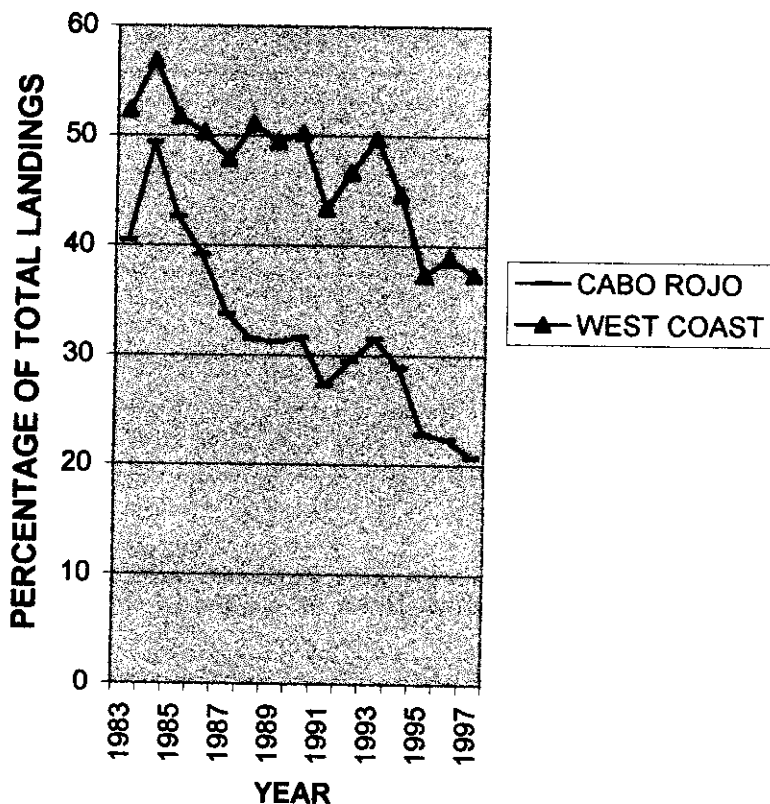


Figure 2. Percentage of total annual landings reported from Cabo Rojo and the West Coast for 1983-97.

Pots continued to show a decreasing trend in their catch percentages since 1982 (Matos-Caraballo and Sadovy 1990, 1991; Matos-Caraballo 1992, 1993, 1995, 1997), when fish traps alone caught 71.2% of the total pounds reported (Collazo and Calderón 1988) to 24% during 1994-97. On the other hand, an

increasing trend was observed in the percentage of reported landings taken by all lines combined, when compared with 1982, in which the percentage was 12.4% (Collazo and Calderón 1988) to 44% during 1994-97. Nets have shown a similar trend. For example, the gill nets and trammel nets caught 2.7% in 1982 (Collazo and Calderón 1988), while in 1995-97 they caught 21% .

Average annual catch per unit effort (CPUE) in was estimated to be 63 - 80‰ during 1994-97. Collazo and Calderón (1988) mentioned that during 1979-82, the CPUE for the vessels of 21-25 ft was 122.74 pounds/trip. This is another evidence of the overfishing symptoms of Puerto Rico's fishery resources.

Commercial Biostatistical Data

The commercial biostatistical data indicates that the Puerto Rico fishery resource is overfished. *P. argus* in Puerto Rico has a minimum legal size of 89 mm carapace length. During 1994-97, a total of 36% of *P. argus* sampled was caught below minimum legal size. Approximately 99% of individuals of *L. vivanus* sampled by FSP were caught before reaching sexual maturity during 1994-97.

CONCLUSION

In 1979, reports of landings in Puerto Rico recorded 7,212,000 pounds of fish and shellfish. During the decade of the eighties, landings decreased consistently. During 1994-97, reported landings ranged between 2.7 million and 3.8 million pounds of fish and shellfish. Landings information has shown that several fish and shellfish species that fishermen discarded in the past, and that did not have market value are now easily sold. These species are probably important because of the decreased landings of the traditional valuable species. Another symptom of overfishing is evidenced in the CPUE data. During 1979-82, average pounds per trip were 122.73 and in 1997, were 72 pounds per trip.

Another set of problems associated with the fishery resources is observed through biostatistical data, which show that species such as *P. argus*, and *L. vivanus* are consistently taken below the MSSM, although *P. argus* is protected by Fishery Management Plan. Clearly more enforcement is needed.

After the analysis of these facts, it is concluded that during 1994-97, several fishery resources in Puerto Rico have continued to decline, despite an increase in the number of landings reported, due to an increase in the number of fishermen that cooperates with FSP. The information presented in this report urges the need for measures to protect the fishery resources of Puerto Rico, including the improvement of the enforcement of the existing fishing regulations and Fishery Management Plans.

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Table 1. Landings reported by species in Puerto Rico during 1994-1997.

SPECIES	1994		1995		1996		1997		TOTAL	
	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P	POUNDS	*P/P
FISH										
TUNA	90,826	1.25	115,237	1.31	137,232	1.21	216,568	1.17	559,863	1.24
BALLYHOO	34,422	0.94	56,930	1.02	58,277	0.93	58,436	1.12	208,065	1.00
GRUNTS	142,137	1.35	142,689	1.39	172,059	1.36	164,152	1.40	621,037	1.38
HOGFISH	32,328	2.04	49,476	1.89	60,855	1.83	69,087	1.99	211,746	1.94
TRUNKFISH	53,559	1.73	68,964	1.90	67,704	1.90	82,230	1.86	272,457	1.85
DOLPHINFISH	91,172	1.68	198,117	1.46	152,718	1.46	166,887	1.56	608,894	1.54
SQUIRRELFISH	9,005	1.09	14,132	1.19	15,626	1.13	21,632	1.21	60,395	1.16
MULLET	29,551	1.25	57,448	1.12	53,587	1.08	55,583	1.18	196,169	1.16
JACKS	49,342	1.36	67,614	1.20	59,667	1.16	82,436	1.17	259,059	1.22
PARROT FISH	116,106	1.90	80,330	1.44	103,537	1.31	111,264	1.41	411,237	1.52
GROUPERS										
RED HIND	28,738	1.84	42,383	1.77	53,431	1.84	60,223	1.96	184,775	1.85
NASSAU GROUPE	7,737	1.66	7,772	1.58	12,679	1.52	15,513	1.60	43,701	1.59
GROUPE CATEGORY	85,936	1.90	100,815	1.80	93,301	1.74	79,201	1.89	359,253	1.83
MOJARRA	28,917	1.56	32,262	1.40	25,610	1.23	23,768	1.27	110,557	1.37
SNAPPERS										
LANE SNAPPER	134,254	1.97	242,336	1.92	272,243	1.73	370,461	1.91	919,294	1.88
YELLOWTAIL SNAPPER	186,703	1.94	292,400	1.86	275,075	1.71	273,823	1.82	1,028,001	1.83
SILK SNAPPER	338,163	2.47	363,811	2.29	312,535	2.22	285,907	2.28	1,300,416	2.32
MUTTON SNAPPER	39,718	2.03	79,936	1.83	76,674	1.62	76,383	1.80	272,911	1.82
OTHER SNAPPER	48,430	1.97	69,539	1.83	61,606	1.78	82,800	1.88	262,395	1.87
TRIGGERFISH	46,430	1.43	68,844	1.38	63,969	1.34	71,187	1.49	252,430	1.41
BARRACUDA	14,045	1.25	20,178	1.23	22,802	1.10	27,847	1.34	84,872	1.25
PORGY	11,192	1.41	18,788	1.37	30,736	1.23	28,463	1.34	89,179	1.34
SNOOK	34,624	1.60	49,162	1.27	49,422	1.32	52,896	1.38	186,104	1.39
TARPON	4,654	0.69	1,795	0.98	103	0.64	1,432	0.96	7,984	0.96
GOATFISH	10,044	1.84	14,564	1.53	21,133	1.47	18,812	1.50	64,553	1.59
SARDINES	25,713	1.16	28,684	0.96	27,867	1.05	32,474	0.90	114,738	1.02
MACKERELS	121,619	1.81	188,706	1.56	166,959	1.40	203,887	1.45	681,171	1.56
SHARKS	36,256	1.43	74,809	1.17	59,847	1.17	61,268	1.14	232,180	1.23
MARGATE	2,315	1.76	2,821	1.43	4,043	1.36	3,610	1.46	12,789	1.50
CLASSIFIED										
FIRST CLASS	174,204	1.62	239,808	1.70	150,958	1.61	141,691	1.54	706,661	1.62
SECOND CLASS	144,367	0.97	132,663	0.87	148,013	0.78	102,048	1.01	527,091	0.91
THIRD CLASS	38,464	1.03	87,898	0.58	71,463	0.73	122,081	0.92	319,906	0.82
TRASH	922	1.26	2,831	0.77	2,560	0.60	2,016	0.70	8,329	0.83
OTHER FISHES	99,934		159,140		142,656		247,980		649,710	
TOTAL FISHES	2,311,827	1.67	3,172,902	1.59	3,026,947	1.55	3,316,246	1.59	11,827,922	1.60
SHELLFISH										
CONCH	170,720	2.67	215,488	2.32	242,720	1.69	238,887	2.09	867,815	2.19
LAND CRAB	2,015	14.94	5,730	5.39	12,928	4.03	10,066	13.71	30,739	9.52
LOBSTER	192,181	4.60	280,438	4.11	282,610	3.68	284,222	3.97	1,039,451	4.09
OYSTER	2,889	0.90	6,831	2.80	8,209	2.32	608	1.88	18,537	1.75
OCTOPUS	25,837	1.67	19,393	2.01	37,196	1.78	38,740	1.69	121,166	1.79
OTHER SHELLFISH	8,933	3.58	8,217	3.59	6,429	1.67	7,211	2.57	30,790	3.85
TOTAL SHELLFISH	402,575	4.62	536,097	3.95	590,092	3.25	579,734	3.59	2,108,498	3.85
TOTAL	2,714,402	2.10	3,708,999	1.94	3,617,039	1.79	3,895,980	1.87	13,936,420	1.93

* P/P = Average Price Per Pound

Table 2. Landings reported by municipality and by coast in Puerto Rico during 1994-1997.

LOCATION	1994			1995			1996			1997		
	POUNDS	VALUE (US DOLLAR)	AVERAGE PRICE PER POUND	POUNDS	VALUE (US DOLLAR)	AVERAGE PRICE PER POUND	POUNDS	VALUE (US DOLLAR)	AVERAGE PRICE PER POUND	POUNDS	VALUE (US DOLLAR)	AVERAGE PRICE PER POUND
NORTH	381,871	788,134	2.07	559,234	1,133,860	2.03	383,363	798,521	2.08	481,383	1,070,222	2.10
Coast	6,063	11,291	1.85	19,953	23,726	1.19	21,137	26,413	1.25	21,012	27,022	1.29
Offshore	0	0	0	0	0	0	0	0	0	0	0	0
Camuy	2,059	2,999	1.46	5,158	12,239	2.38	5,817	15,208	2.61	13,653	38,932	2.85
Carolina	42,121	93,695	2.23	52,785	118,771	2.25	48,614	107,731	2.22	13,809	27,217	1.97
Bacardi	15,234	29,217	1.92	21,687	40,705	1.88	18,236	36,516	2.00	35,990	69,462	1.93
Masajade	5,312	10,077	1.90	14,208	28,074	1.98	15,656	32,403	2.07	18,853	40,013	2.12
Vega Baja	9,316	19,573	2.10	18,181	37,533	2.07	19,811	42,673	2.15	19,878	57,902	2.91
Dorado	27,054	54,997	2.03	30,224	61,853	2.05	26,338	52,449	1.99	21,429	44,753	2.09
San Juan	9,905	19,145	1.92	16,623	33,039	1.98	8,405	12,796	1.52	3,576	5,891	1.65
Sancti Spiritus	44,136	83,145	1.88	47,611	96,186	2.02	38,217	71,108	1.86	62,690	140,536	2.24
Carolina	21,248	36,010	1.69	23,429	40,429	1.73	19,223	31,026	1.61	24,096	39,230	1.63
Luzon	92,181	178,720	1.94	96,226	185,071	1.91	59,724	105,922	1.77	61,936	109,418	1.77
Rio Grande	4,652	10,893	2.34	25,243	23,070	0.91	19,525	43,262	2.22	15,020	60,521	4.03
Laqueilla	5,199	12,266	2.36	29,919	57,581	1.92	19,280	40,360	2.10	24,664	51,846	2.10
EAST	335,015	686,821	2.05	666,191	1,387,159	2.08	677,072	1,383,538	2.03	729,644	1,558,601	2.14
Puerto Rico	84,003	198,522	2.36	188,870	430,843	2.28	150,643	321,902	2.14	157,645	343,160	2.18
Ceiba	34,472	68,574	1.99	64,573	134,676	2.09	56,372	119,864	2.12	67,033	150,137	2.24
Narajabo	98,248	208,575	2.12	136,067	305,208	2.23	80,722	190,842	2.36	81,781	191,914	2.34
Hirigocayo	56,452	101,038	1.79	72,548	132,859	1.83	90,202	163,861	1.82	109,665	213,533	1.94
Yabucoa	26,078	45,676	1.75	39,081	78,930	2.02	35,280	69,381	1.96	35,767	71,845	2.01
Arroyo	8,140	14,896	1.83	9,517	13,010	1.37	38,529	64,461	1.67	44,896	148,269	3.30
Arroyo	18,870	35,747	1.89	27,620	48,336	1.75	23,068	53,737	2.33	25,562	62,127	2.43
Culebra	2,14	4,713	2.20	14,047	24,047	1.71	20,676	40,611	1.96	26,925	37,596	1.39
SUDBR	284,283	582,243	2.05	629,331	1,279,182	2.03	60,160	110,590	1.84	63,533	108,918	1.72
Pailon	22,359	51,276	2.29	69,169	112,008	1.61	152,130	345,125	2.27	163,453	372,078	2.28
Arroyo	44,356	71,453	1.61	141,033	333,724	2.36	138,886	304,078	2.17	180,184	403,803	2.24
Arroyo	59,982	119,969	2.00	93,877	223,855	2.38	69,904	167,087	2.39	72,763	155,221	2.13
San Juan	31,374	63,296	2.02	50,874	122,122	2.40	153,251	350,248	2.29	226,120	500,206	2.21
Juana Diaz	100,040	218,051	2.18	141,233	326,127	2.31	107,307	237,118	2.21	85,245	183,134	2.13
Ponce	75,821	149,366	1.97	81,836	166,384	2.03	69,050	144,721	2.10	49,056	146,808	2.99
Perrinita	54,535	159,817	2.93	59,376	184,104	3.10	38,814	118,416	3.05	34,850	51,291	1.47
Guayama	12,860	17,034	1.33	35,755	52,917	1.48	151,945	284,416	1.87	116,112	213,663	1.84
Guayama	167,091	298,594	1.78	174,461	318,021	1.82	160,801	260,339	1.62	178,126	298,819	1.68
San Juan	111,725	167,645	1.49	168,806	277,708	1.64	140,726	249,113	1.77	145,826	269,305	1.85
COAST	1,212,653	2,113,006	1.74	1,386,181	2,445,512	1.76	808,211	1,429,212	1.79	868,016	1,460,320	1.68
San Juan	109,455	212,020	1.94	127,774	250,763	1.96	44,843	78,822	1.76	22,039	21,129	0.96
Arroyo	189,655	371,663	1.96	372,931	746,863	2.00	250,333	501,633	1.99	250,333	501,633	1.99
Rio Grande	27,974	60,176	2.15	86,327	191,021	2.21	93,540	222,371	2.38	85,733	178,572	2.08
Aguaada	88,039	99,643	1.13	99,755	125,344	1.26	216,286	317,650	1.47	114,200	168,409	1.47
Aguaada	118,782	153,594	1.29	209,855	290,884	1.39	216,286	317,650	1.47	200,026	251,424	1.26
TOTAL	2,214,402	5,169,203	2.34	2,704,999	7,285,091	2.69	3,617,039	7,038,018	1.95	3,895,980	7,894,900	2.03

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Table 3. Landings reported by species and by gear in Puerto Rico during 1994.

SPECIES	BEACH SEINE (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	OIL NET (Pounds)	BOTTOM LINE (Pounds)	TRIGLE LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	CYST NET (Pounds)	NOE AND LIME (Pounds)	SKIN DIVING (Pounds)	BY BAND (Pounds)	SCUBA DIVING (Pounds)	TRAMMEL NET (Pounds)	TOTAL (Pounds)	
FISH																
TUNA	1,350	5,846	0	306	11,880	69,324	28	0	0	243	0	0	0	0	90,826	
BALLYHOO	9,298	1,206	0	9,484	10,496	1,089	7	0	148	0	0	0	0	2	23,422	
SPRATTS	2,156	24,270	0	52,767	29,641	288	262	0	211	0	0	0	86	2,056	142,127	
HOGFISH	86	6,107	0	3,291	1,414	64	7	0	0	0	0	0	1,703	19,656	33,238	
THUNDER	327	27,824	0	6,400	6,820	188	74	0	0	0	0	0	225	1,840	53,559	
DOLFINFISH	0	0	0	263	31,292	37,298	1,974	0	0	325	0	0	0	0	110	91,172
SOUREL FISH	474	4,810	0	2,413	1,623	193	237	0	89	0	0	0	0	3	9,603	
MULLLET	273	187	0	21,422	1,099	28	46	0	284	0	0	0	0	0	4,043	
JACK	9,128	5,229	0	16,493	13,993	7,216	2,733	0	270	0	0	0	0	3	157	
PARROTFISH	214	26,812	0	50,616	3,229	82	26	0	0	0	0	0	0	257	24,657	
GROUPEL																
RED HIND	181	13,248	19	3,031	11,018	240	125	0	54	0	0	0	63	1,598	25,754	
KASSAU GROUPEL	16	3,314	0	240	3,194	71	20	0	0	0	0	0	0	0	7,737	
GROUPEL CATEGORY	172	23,266	41	312	45,246	944	165	0	62	0	0	0	191	187	83,296	
MOJARRA	3,873	1,720	0	19,289	1,278	28	22	0	644	0	0	0	0	0	1,238	
SNAPPERS																
LANE SNAPPER	1,631	27,356	3	3,276	81,131	277	1,046	0	871	0	0	0	3,222	1,066	134,214	
YELLOWTAIL SNAPPER	1,404	63,986	21	14,579	74,566	2,826	6,478	0	220	202	0	0	1,246	0	186,220	
SILK SNAPPER	0	114,717	0	0	220,631	0	1,814	0	0	0	0	0	0	0	338,657	
MUTTON SNAPPER	1,403	7,873	202	4,222	12,744	0	3,070	0	0	0	122	0	2,090	982	39,715	
OTHER SNAPPERS	848	11,899	0	7,200	12,822	609	463	0	101	0	211	0	7,603	3,561	48,420	
TRINGOLEFISH	71	24,202	2	3,271	9,183	128	50	0	26	0	39	0	5,710	3,092	46,420	
BARKACURA																
BARACUDA	2,658	1,284	0	1,909	1,574	2,000	780	0	70	0	0	0	784	73	14,405	
POBLY																
SNOOK	1,827	2,939	0	80	1,297	7	1,870	0	10	0	0	0	221	1,211	11,192	
TARON																
TARON	333	29	0	3,118	1,197	241	106	0	613	0	0	0	493	847	24,624	
GOATFISH																
GOATFISH	16	6,343	0	2,197	1,029	224	0	0	0	0	0	0	0	0	4,624	
SARDINES																
SARDINES	805	674	0	1,140	2,011	127	20	0	20,886	0	0	0	0	0	10,644	
MACKERELS																
MACKERELS	6,629	1,293	0	4,686	56,243	48,098	223	0	218	0	62	0	0	0	121,619	
SHARKS																
SHARKS	410	0	0	5,286	21,527	2,815	1,253	0	0	0	250	0	1,417	2,700	38,245	
MARGATE																
MARGATE	12	74	0	1,132	620	0	0	0	0	0	0	0	0	0	427	
CLASSIFIED																
FIRST CLASS	17,031	48,775	0	13,622	23,211	40	642	0	41	0	96	0	16,808	9,238	174,204	
SECOND CLASS	5,423	12,547	0	37,624	30,892	20	242	0	0	0	0	0	1,016	27,819	144,267	
THIRD CLASS	22	20,623	0	39	7,207	151	0	0	241	0	73	0	9,246	2,728	40,464	
TRASH																
TRASH	270	387	0	2	27	0	0	0	0	0	0	0	0	0	657	
OTHER FISHES																
OTHER FISHES	1,200	7,187	203	1,000	20,124	1,649	1,228	0	0	0	0	0	0	0	221	
TOTAL FISHES	87,129	623,483	606	308,623	873,446	209,130	22,426	0	25,774	875	7,181	0	14,929	146,056	2,211,627	
SHELLFISH																
CONCH	20	0	0	0	0	0	0	0	0	0	1,110	0	189,480	0	170,220	
LAND CRAB	0	0	0	0	0	0	0	2,013	0	0	0	0	0	0	2,013	
LOBSTER	192	24,019	11,852	2,871	2,090	23	12	0	0	0	1,049	0	83,820	14,227	122,141	
OYSTER	0	0	0	0	0	0	0	0	0	0	0	2,889	0	0	2,889	
OCTOPUS	24	979	141	311	0	0	0	0	0	0	0	0	770	0	2,889	
OTHER SHELLFISH																
OTHER SHELLFISH	119	2,584	1,204	2,200	278	0	0	0	0	0	20,272	0	4,092	0	25,637	
TOTAL SHELLFISH	247	27,184	13,197	6,442	2,368	23	12	2,013	0	0	22,222	2,889	216,292	16,856	402,373	
TOTAL	87,476	700,667	15,803	315,165	895,814	209,173	22,438	2,013	25,774	875	25,515	2,889	245,241	179,920	2,714,402	

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Table 4. Landings reported by species and by gear in Puerto Rico during 1995.

SPECIES	BEACH SEINE TRAP (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	OLL NET (Pounds)	BOTTOM LINE (Pounds)	TROLL LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	CYST NET (Pounds)	ROD AND LINE (Pounds)	SCUB DIVING (Pounds)	BY HAND (Pounds)	SCUBA DIVING (Pounds)	TRAMSHEL NET (Pounds)	TOTAL (Pounds)
FISH															
TUNA	15,414	0	0	1,477	20,420	73,392	0	0	304	21	0	0	0	0	115,237
BALLYHOOD	13,311	0	0	30,503	3,076	1,813	0	0	780	0	0	0	0	0	48,503
GRUNTS	4,272	38,711	1,811	25,801	24,720	1,246	0	0	494	0	0	0	0	0	145,684
HOOPFISH	917	5,281	15	2,794	3,712	0	16	0	96	11	611	0	2,807	129	46,476
TRUNKFISH	207	37,243	323	4,682	3,814	0	773	0	163	0	83	0	5,657	1,270	88,944
DOLPHINFISH	441	0	0	4,226	41,861	148,233	0	0	0	0	0	0	0	0	194,761
SQUIDBELLFISH	374	4,571	0	1,309	6,716	803	0	0	281	0	0	0	0	0	14,133
MULLET	6,094	1,146	0	63,777	3,812	482	73	0	514	0	0	0	0	0	74,748
JACKS	14,409	1,779	129	0	14,409	10,899	11,483	0	904	0	0	0	313	789	47,614
PARROTFISH	1,832	15,473	20	14,628	2,280	45	0	0	53	0	404	0	784	2,079	40,326
GROUPEFS															
RED HOND	148	8,244	522	1,977	31,148	0	668	0	693	0	29	0	3,525	424	42,383
NASSAU GROUPEF	7	3,021	0	32	3,093	0	79	0	29	0	0	0	371	30	7,772
GROUPEF CATEGORY	326	23,413	37	1,474	61,733	0	737	0	722	0	127	0	1,176	34	106,813
MOJARRA	4,276	856	0	23,252	3,493	161	100	0	783	0	0	0	0	0	29,562
SNAPPERS															
LANE SNAPPER	5,770	101,023	180	26,483	70,497	1,886	22,891	0	112	24	131	0	272	279	243,236
YELLOWTAIL SNAPPER	6,029	32,291	31	7,419	234,497	12,273	9	0	1,206	0	7	0	1,590	264	292,400
SILK SNAPPER	0	36,136	0	0	206,274	0	0	0	0	1,401	0	0	0	0	243,811
MUTTON SNAPPER	1,827	14,090	74	6,278	20,114	1,152	1,482	0	716	23	24	0	3143	792	79,826
OTHER SNAPPER	1,683	11,231	0	8,277	20,210	843	323	0	806	0	289	0	4793	7371	69,439
TRIGGERSH	148	24,240	126	2,123	24,206	202	200	0	243	3	109	0	911	2107	65,844
BARRACUDA	6,027	480	0	3,449	1,112	6,027	29	0	86	16	0	0	276	219	20,174
ROBY	1,291	1,891	10	5,240	3,258	61	178	0	72	3	0	0	290	824	11,728
SMOOK	12,212	247	0	12,212	1,290	909	142	0	373	0	23	0	0	0	49,467
TARPON	273	103	0	1,256	62	0	0	0	0	0	0	0	0	0	1,922
OOATFISH	19	11,433	0	468	1,074	73	0	0	0	0	0	0	0	0	14,564
SARDINES	2,670	401	0	3,819	0	0	0	0	21,480	0	0	0	0	0	28,684
MACARELS	8,244	2,813	0	2,238	102,479	63,000	270	0	247	90	0	1,644	486	63	188,706
SHARKS	409	16,420	0	4,717	20,481	8,231	3,746	0	91	29	0	0	2,872	2,620	74,809
MARGATE	292	487	0	1,010	354	0	0	0	3	100	0	0	0	0	2,121
CLASSIFIED															
FIRST CLASS	1,490	120,844	145	7,272	54,243	94	1,681	0	1,612	18	142	0	3,094	2,0761	230,900
SECOND CLASS	1,518	79,176	0	2,783	13,284	0	0	0	33	0	0	0	1,053	2,880	124,660
THIRD CLASS	14	21,245	42	1,809	8,665	221	0	0	21	2	0	0	31,800	39	47,829
TRASH	0	1,237	0	39	0	0	0	0	0	0	0	0	0	191	241
OTHER FISHES	19,252	41,449	0	24,233	41,007	970	0	0	0	0	236	0	24,719	4,232	139,140
TOTAL FISHES	139,282	709,702	3,090	204,018	1,220,861	242,147	44,688	0	33,003	1,854	2,736	164	169,848	210,200	3,172,902
SHELLFISH															
CONCH	0	0	0	0	0	0	0	0	0	0	0	1,262	201,636	0	213,498
LAND CRAB	0	0	0	0	0	0	0	3,720	0	0	0	0	0	0	3,720
LOBSTER	245	119,766	23,811	1,152	0	0	0	0	741	0	2,612	0	11,072	0	136,036
OYSTER	0	0	0	0	0	0	0	0	0	0	0	492	0	0	492
OCTOPUS	9	1,591	113	180	0	0	0	0	14	0	37,090	0	8736	0	40,800
OTHER SHELLFISH	184	1,752	0	920	0	0	0	0	560	0	193	0	1,923	1,863	8,217
TOTAL SHELLFISH	548	124,110	23,924	2,132	0	0	0	3,720	755	0	12,077	2,062	213,672	2,163	236,997
TOTAL	139,837	833,812	37,014	207,250	1,220,861	242,147	44,688	3,720	33,758	1,854	11,263	20,847	181,820	212,363	3,209,999

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Table 5. Landings reported by species and by gear in Puerto Rico during 1996.

SPECIES	BEACH SEINE (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	OIL NET (Pounds)	BOTTOM LINE (Pounds)	TROLL LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	CAST NET (Pounds)	ROD AND LINE (Pounds)	SKY DIVING (Pounds)	BY HAND (Pounds)	SCUBA DIVING (Pounds)	TRAMMEL NET (Pounds)	TOTAL (Pounds)
FISH															
TUNA	8,280	1,670	0	2,558	28,310	95,032	282	0	3	16	0	0	84	17	137,232
BALLETROQ	14,743	1,520	11	26,044	3,280	487	21	0	360	0	0	0	0	1,701	28,277
GRUNTS	6,881	23,183	63	42,650	20,332	254	1,191	0	206	0	64	0	1,778	47,431	178,039
HOGFISH	184	9,483	0	7,282	2,582	324	43	0	0	0	472	0	24,026	11,289	40,551
TRUNKFISH	692	37,773	173	4,201	6,014	68	161	0	112	0	245	0	4,274	13,241	67,704
DOLPHINFISH	71	1,243	0	3,281	40,212	106,142	38	0	488	0	0	0	0	49	107,644
SOURLEAF FISH	152	7,149	20	1,668	6,874	180	727	0	102	0	11	0	0	854	1,961
MULLET	3,983	1,461	37	39,272	1,582	244	92	0	0	0	0	0	0	854	42,682
JACKS	11,623	2,004	0	11,072	27,921	3,201	210	0	267	62	24	0	222	481	22,867
PARROT FISH	1,259	26,211	0	22,480	4,221	273	52	0	63	0	720	0	7,774	45,433	108,217
GROUPELS															
RED BEND	84	15,220	62	1,610	29,721	274	742	0	34	13	46	0	5,208	117	29,431
KASSAU GROUPEL	0	1,481	0	228	9,147	404	22	0	11	0	3	0	1,214	41	12,679
GROUPEL CATFOOT	112	13,894	0	3,286	50,409	0	164	0	0	0	412	0	21,610	1,270	72,201
MOZARLA	3,282	406	0	14,601	1,527	120	18	0	1,482	0	92	0	148	21	23,410
SNAPPERS															
LANE SNAPPER	4,230	112,222	154	30,257	71,213	219	21,286	0	413	0	111	0	3,292	8,626	272,242
YELLOWTAIL SNAPPER	3,693	24,190	28	16,988	209,512	88	4,787	0	496	0	118	0	1,246	9,802	275,622
SILK SNAPPER	0	47,827	0	0	264,208	0	0	0	0	0	0	0	0	0	312,035
MUTTON SNAPPER	1,583	15,700	143	10,618	40,491	139	2,288	0	312	0	207	0	3,256	2,512	26,674
OTHER SNAPPER	2,129	11,422	14	10,232	24,921	793	444	0	161	0	224	0	3,863	6,403	61,626
TRIGRIDAE															
BARBACUDA	348	32,222	37	1,612	17,430	378	283	0	69	0	66	0	6,402	1,209	63,489
PORGY	4,438	612	22	4,223	1,690	2,246	40	0	47	21	12	0	336	68	28,802
SNOOK	16,713	919	6	24,726	10,428	1,129	113	0	605	23	224	0	219	1,221	219,122
TARFON	0	5	0	32	66	0	0	0	0	0	0	0	0	0	103
GOATFISH	90	15,261	32	1,988	1,868	120	121	0	24	0	0	0	0	0	183
SARDINES	6,024	418	0	3,694	7,379	296	423	0	9,378	0	0	0	0	0	27,827
MACQUELIS	5,611	7,146	40	15,679	101,848	37,240	624	0	337	0	647	0	1,124	803	166,939
SHARKS	420	0	0	4,834	23,082	2,126	5,913	0	0	12	89	0	3,224	13,091	29,847
MARQUITE	0	1,712	0	868	280	0	18	0	83	0	3	0	210	455	6,602
CLASSIFIED															
FIRST CLASS	3,612	27,216	168	6,078	18,421	321	2,124	0	12	0	0	0	18,271	24,049	158,221
SECOND CLASS	4,007	47,634	13	11,844	2,440	74	0	0	8	66	0	0	282	81,451	148,613
THIRD CLASS	1,990	24,840	134	1,729	5,810	164	54	0	0	0	0	0	7,243	1,489	71,463
TRASH	1,000	1,350	0	0	7	0	0	0	0	0	0	0	0	0	2,350
OTHER FISHES	16,231	18,448	56	21,426	24,652	10,018	980	0	5,209	9	163	0	12,014	0	163,646
TOTAL FISHES	120,416	652,767	1,276	281,173	1,089,127	272,426	23,086	0	24,351	213	4,266	0	144,423	283,009	3,225,947
SHELLFISH															
CONCH	328	0	0	91	0	0	0	0	0	0	4,825	0	227,417	0	232,720
LAND CRAB	0	0	0	0	0	0	0	12,828	0	0	0	0	0	0	12,828
LOBSTER	404	197,213	20,294	1,288	0	0	0	0	0	0	2,144	0	112,202	26,488	208,610
OYSTER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCTOPUS	43	10,173	66	130	0	0	0	0	0	14,292	0	17,182	0	27,648	
TOTAL SHELLFISH	51	1,456	1	268	11	0	0	12,828	0	14,292	0	2,144	0	2,476	208,610
TOTAL	121,091	771,710	20,299	284,162	1,099,168	272,645	23,087	12,828	24,359	212	4,269	0	146,714	283,561	3,228,627

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Table 6. Landings reported by species and by gear in Puerto Rico during 1997.

SPECIES	BEACH SEINE (Pounds)	FISH TRAP (Pounds)	LOBSTER TRAP (Pounds)	GILL NET (Pounds)	BOTTOM LINE (Pounds)	TROLL LINE (Pounds)	LONG LINE (Pounds)	LAND CRAB TRAP (Pounds)	CAST NET (Pounds)	ROD AND LINE (Pounds)	SKIN DIVING (Pounds)	BY HAND (Pounds)	SCUBA DIVING (Pounds)	TRAMMEL NET (Pounds)	TOTAL (Pounds)	
FISH																
TUNA	36,878	0	0	4,150	20,726	120,202	158	0	0	173	0	0	0	60	216,458	
BALMOUTH	5,419	133	0	47,840	0	0	153	0	293	0	0	0	0	0	1,566	
GRUNTS	2,763	27,736	0	29,827	21,692	80	312	0	428	0	13	0	2,208	37,817	164,132	
ROQUEFISH	181	10,773	15	4,151	3,694	10	68	0	0	0	248	0	21,910	28,133	69,087	
TRINKFISH	972	45,214	1,118	5,436	4,543	0	472	0	451	9	120	0	7,411	13,463	62,220	
DOLPHINFISH	0	0	0	1,905	22,472	127,143	38	0	0	3,023	0	0	0	0	411,106,487	
SQUIDFISH	181	9,137	0	3,200	6,732	0	211	0	124	0	162	0	10	1,292	21,623	
MULLET	3,228	291	0	44,218	4,663	49	18	0	1,203	0	31	0	41	534	25,582	
JACKS	18,793	3,231	0	18,233	24,411	2,292	751	0	147	0	249	0	862	2,269	81,246	
PARROTFISH	1,489	21,809	24	22,882	3,504	0	127	0	133	0	776	0	16,247	41,061	131,264	
CRUSTACEANS																
RED PIND	124	14,229	0	1,563	20,423	5	1,125	0	15	0	143	0	11,727	818	40,223	
MASSAU GROUPE	111	2,463	0	201	11,817	10	20	0	23	0	66	0	1,479	74	15,513	
GROUPE CATEGORY	120	11,624	0	1,292	20,294	0	1,057	0	26	0	197	0	15,272	86	29,201	
MOJARRA	3,028	517	0	16,072	2,204	10	27	0	1,282	0	90	0	47	47	22,768	
SNAPPERS																
LANE SNAPPER	2,223	107,443	249	47,481	81,201	1,482	25,269	0	728	0	117	0	1,489	2,273	270,461	
YELLOWTAIL SNAPPER	4,287	26,401	0	16,273	209,272	4,998	3,392	0	32	0	104	0	183	6,547	272,522	
SILK SNAPPER	0	47,130	0	0	228,757	0	0	0	0	0	0	0	0	0	285,907	
MUTTON SNAPPER	4,207	17,894	0	9,640	25,582	2,831	2,529	0	17	0	292	0	3,444	2,831	76,883	
OTHER SNAPPER	2,129	13,024	78	800	46,408	1,274	1,280	0	45	0	254	0	7,541	5,209	82,800	
TRINGIDFISH	212	27,292	62	1,822	18,106	171	46	0	172	0	37	0	10,822	4,285	73,187	
BARRACUDA	2,553	0	0	8,700	1,894	7,728	26	0	127	0	126	0	485	277	27,447	
PORGY	1,003	11,449	0	9,269	2,580	192	163	0	22	0	0	0	281	2,125	28,403	
SNOOK	9,127	322	0	24,214	6,004	680	119	0	182	0	203	0	429	405	27,805	
TARPON	80	0	0	1,110	152	0	0	0	0	0	0	0	0	0	1,532	
GOATFISH	118	13,892	0	2,126	3,111	0	16	0	40	0	0	0	0	2,208	18,212	
SARDINES	2,561	217	0	4,822	0	0	0	0	23,690	0	0	0	0	24	22,474	
MACRELS	9,472	1,027	0	29,208	102,862	22,690	312	0	274	0	1,660	0	299	2,294	205,887	
SHARKS	472	0	0	8,418	27,294	1,723	13,112	0	72	0	697	0	1,821	8,001	61,628	
MARGATE	0	1,256	0	1,132	654	0	0	0	20	0	0	0	0	0	245	
CLASSIFIED																
FIRST CLASS	840	85,380	0	6,744	17,244	137	128	0	0	0	111	0	14,209	14,865	141,091	
SECOND CLASS	692	49,470	0	2,786	1,912	177	197	165	0	70	42	504	0	26,133	0	102,045
THIRD CLASS	281	23,297	0	847	15,897	12	224	0	466	0	0	0	0	10,225	122,081	
TRASH	0	1,430	0	10	456	0	0	0	0	0	0	0	0	0	2,616	
OTHER FISHES	20,097	27,091	0	26,265	77,294	0	14,472	0	0	145	263	0	23,019	0	247,880	
TOTAL FISHES	135,740	744,026	11,549	428,414	1,122,620	324,267	65,814	0	20,607	3,204	6,449	0	182,291	197,189	5,216,246	
SHELLFISH																
CONCH	0	0	0	0	0	0	0	0	0	0	4,501	0	224,586	0	229,087	
LAND CRAB	0	0	0	0	0	0	0	10,066	0	0	0	0	0	0	10,066	
LOBSTER	178	111,614	41,460	1,005	0	0	0	0	307	0	3,618	0	109,237	17,202	214,222	
OYSTER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OCTOPUS	0	1,344	581	141	0	0	0	0	0	0	22,801	0	13,444	129	28,740	
OTHER SHELLFISH	208	866	4	232	0	0	0	0	1,814	0	232	0	3,673	0	7,211	
TOTAL SHELLFISH	386	114,024	41,845	1,278	0	0	0	10,066	2,461	0	20,872	694	380,843	17,432	279,724	
TOTAL	136,126	858,050	53,394	429,692	1,122,620	324,267	65,814	10,066	22,068	3,204	36,921	694	345,223	214,621	5,495,970	

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