

COMMERCIAL LANDINGS STATISTICS RED SNAPPER IN THE GULF OF MEXICO

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I. Introduction

Data on the quantity and value of seafood products have been collected in varying forms since the late 1800's. Commercial landings statistics for red snapper are reported by Schirripa and Legault, 1999, for as early as 1880. Although data on commercial landings exists earlier than 1962, the database prepared for the Southeast Data, Assessment and Review (SEDAR) on red snapper will only include data for 1962 through 2002 (and preliminary data for 2003).

Commercial landings statistics are the quantities and value of seafood products sold to established (licensed) wholesale and retail seafood dealers. Currently, these data are collected by trip ticket programs managed by state agencies in Florida, Alabama, Mississippi and Louisiana. Monthly Marine Product Reports are required to be submitted by dealers in Texas. Prior to the implementation of the trip ticket programs, landings statistics were traditionally collected monthly from seafood dealers as totals by species for the month. State or federal field agents would visit each dealer in their assigned area and record the total quantity and value of the landings (purchases) for each species during the month. In addition, the agents would assign an estimate of the type of gear and fishing area where the landings were caught.

The Southeast Fisheries Science Center (SEFSC) has maintained the commercial landings statistics (also known as, general canvass landings statistics) in a regional database since the mid 1980's. The states provide the landings statistics that they collect to the SEFSC and these data are summarized and maintained in the same format as the historical general canvass data. This data set is the one that will be considered during the SEDAR Workshop. For purposes of the Assessment Workshop, the objective of the SEDAR Data Workshop is to provide a final (agreed upon) data set that contains the landings at the following level of resolutions - year, month, gear, fishing area (the NMFS statistical grids), and state/county where the fish were landed.

II. Data Review and Issues

As a starting point for the Data Workshop, the data in the SEFSC's general canvass database are summarized by year and state of landing. These annual landings for 1962 through

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2002 are provided in Table 1. With the exception of updates to the data for 1997 and 1998, these data match the data used in the stock assessment done by Schirripa and Legault, 1999.

Table 1. Red snapper commercial landings statistics (pounds, whole weight) by year, 1962 - 2003.*

Year	Florida	Alabama	Mississippi	Louisiana	Texas	Total
1962	5,966	1,893	2,176	694	1,742	12,472
1963	6,569	2,315	1,886	388	2,169	13,326
1964	7,251	2,393	1,849	310	2,250	14,053
1965	6,739	2,495	2,366	243	2,212	14,055
1966	5,761	2,701	2,775	208	1,653	13,098
1967	5,609	2,288	2,890	302	1,409	12,498
1968	4,782	1,214	3,726	277	1,128	11,126
1969	4,750	1,246	2,968	130	925	10,018
1970	4,289	983	2,519	255	916	8,963
1971	4,304	939	2,399	162	1,082	8,886
1972	4,097	1,051	2,266	259	1,238	8,910
1973	4,175	960	2,331	354	781	8,602
1974	5,119	891	1,900	286	743	8,938
1975	4,943	833	1,709	151	627	8,263
1976	4,466	635	1,875	58	495	7,530
1977	3,175	520	1,439	99	440	5,674
1978	3,066	426	1,094	71	388	5,045
1979	2,981	535	1,057	176	215	4,964
1980	3,113	418	930	201	350	5,012
1981	3,479	504	975	421	585	5,966
1982	3,686	581	1,041	468	634	6,409
1983	4,233	535	1,116	718	678	7,281
1984	2,889	340	698	1,092	723	5,742
1985	1,822	199	642	994	780	4,438
1986	1,034	146	531	1,351	903	3,965
1987	713	139	513	1,282	709	3,356
1988	893	97	371	1,818	880	4,059
1989	788	80	213	1,490	527	3,098
1990	843	51	200	1,208	359	2,661
1991	592	51	135	1,161	302	2,241
1992	573	63	131	1,374	903	3,043
1993	427	45	129	1,760	1,044	3,405
1994	409	76	151	1,739	876	3,252
1995	163	36	151	1,613	989	2,954
1996	222	37	238	2,381	1,474	4,351
1997	180	43	240	2,716	1,645	4,824
1998	217	56	209	2,965	1,247	4,694
1999	458	68	79	2,965	1,306	4,877
2000	563	94	103	2,752	1,300	4,812
2001	652	118	52	2,420	1,384	4,626
2002	947	152	46	2,164	1,478	4,787
2003	232	132	43	1,298	828	2,533

Source: Southeast Fisheries Science Center, General Canvass Monthly Landings Statistics, Accumulative Landings System, Miami, FL.

In order to meet the standards for an assessment database, two issues will need to be resolved by the SEDAR Data Workshop. First, the overall consistency and accuracy of the data maintained by the SEFSC need to be reviewed and verified by the 5 states along the Gulf of Mexico. The data from the SEFSC's database were provided to the states prior to the Workshop and any discrepancies reported by the states were resolved and the general canvass database adjusted. Second, any of the data from 1962 - 2002 that are not available by month, gear and fishing area are to be reviewed and to the extent possible, the missing information assigned or estimated to create the assessment database. A review of the general canvass database for these parameters (month, gear, and fishing area) is presented in Table 2.

Table 2. A review of the SEFSC's general canvass database to determine if the commercial landings statistics for red snapper are available for the following breakdowns - month, gear, fishing area (aks, statistical grid).

State	Time period	Year/month	gear	area
Florida	1962 - 1976	Annual	Yes	Yes
	1977 - 1996	Monthly	No	No
	1997 - 2002	Monthly	Yes	Yes
Alabama	1962 - 1976	Annual	Yes	Yes
	1977 - 2002	Monthly	Yes	Yes
Mississippi	1962 - 1976	Annual	Yes	Yes
	1977 - 2002	Monthly	Yes	Yes
Louisiana	1962 - 1977	Annual	Yes	Yes
	1978 - 1989	Monthly	Yes	Yes
	1990 - 1999	Monthly	No	No
	2000 - 2002	Monthly	Yes	Yes
Texas	1962 - 1976	Annual	Yes	Yes
	1978 - 1979	Monthly	No	Yes
	1980 - 1992	Monthly	Yes, but some ?	Yes
	1992 - 2002	Monthly	No	Yes

As shown in Table 2, there are several periods throughout the 30+ years when the landings statistics were not reported/recorded for all three of the required parameters. For the

years 1962 - 1976, only annual landings data are available, but the gear and fishing area were estimated. Beginning in 1977, monthly data were collected; however, gear and fishing area were not estimated for landings in all of the states. From Table 2, landings data for Alabama and Mississippi are complete and do not require further consideration. The landings data for Florida, Louisiana and Texas are not to the level of detail required by the assessment standards and need to be reviewed in an attempt to estimate the data at the month, gear and area resolution. Data on fishing area are needed for two purposes. First, the geographical scope of the assessment is U.S. waters in the Gulf of Mexico and some red snapper are landed at port in the Gulf states that were not caught in U.S. waters. Second, a geographical separation for fishing within the Gulf has been used in developing catch at age in previous assessments and further stratification may be considered by the Assessment Workshop. One possible separation that is being considered is 89°E and catches/landings from grids 1 through 12 would be assigned to the eastern Gulf and catches/landings from grids 13 through 21 would be assigned to the western Gulf. It should be pointed out that other stratifications for the U.S. Gulf waters may be deemed appropriate by the SEDAR participants and the landings statistics should be available by statistical grid in order to accommodate other stratifications.

To facilitate the decisions on the three parameters, the landings data for each of these 3 states are discussed separately.

Florida

Prior to the implementation of the trip ticket program in 1985, landings statistics were collected by federal port agents in the traditional manner by visiting seafood dealers once a month to record the total quantity and value for the month. Because of the number of dealers, estimates of the gear and fishing area were not made for the landings data each month. Instead, the gear and fishing area were estimated for an entire calendar year. This procedure was used during the years 1977 through 1996, and landings statistics by gear and fishing area are only available for the entire year and not for individual months during that period. The percentage breakdown of red snapper landings by gear from the annual general canvass data are provided in Table 3. In order to estimate a distribution of landings by gear and fishing area by month, the only option is to distribute the annual percentages equally for each month during the years 1976 - 1985 when the Florida trip ticket program began. Beginning in 1990, the SEFSC implemented a vessel logbook program and the distribution of the reported catches of red snapper by gear type from that program are shown in Table 4.² The percent of the landings by gear category from the SEFSC's general canvass databases are also presented in Table 4. It should be noted that for 1997 - 2002 the landings data, although reported in the SEFSC database, are from the Florida trip ticket program. The most noteworthy difference between the logbook data and the trip ticket data is the reported catches by bandit rig (i.e., power assisted vertical) gear for 2002 and 2003. Because 2002 was the first year that the fishermen had the option of reporting the use of bandit rig gear on the logbook form, it is difficult to know if this comparison is reliable.

²For the years 1990 - 1992, a 20% sample of the vessels with a Federal Gulf of Mexico reef fish permit and the applicant's mailing address was in Florida was selected to report. Beginning in 1993, all vessels with a Federal Gulf of Mexico permit were selected to report.

The distributions of the landings between the eastern and western Gulf for 1962 - 1996 are provided in Table 5. This table also shows the small proportion of the landings at ports on the west coast of Florida that were caught in the Atlantic Ocean off the east coast of Florida. As with the distributions by gear, the reported catches from the SEFSC logbook program are available beginning in 1990. The comparisons between the landings from the general canvass (1990 - 1996) and the Florida trip ticket program (1997 - 2002) are compared to the reported catches from the logbook data in Table 6. Interestingly, the distributions from the trip ticket and logbook programs from 1997 - 2002 are much closer than the distributions between the general canvass data and the logbook data from 1993 - 1996. These similarities suggest that the distributions from the logbook program may provide a better distribution of the landings by area than the annual general canvass data.

Louisiana

The landings statistics from dealers in Louisiana were collected by both SEFSC and state port agents during the period 1977 through 1999. The distribution of these landings by gear are presented in Table 7. Landings by gear and area were not estimated from 1990 through 1999, until the Louisiana Department of Wildlife and Fisheries (LDWF) initiated their trip ticket program in 2000. As noted above, the SEFSC initiate their coastal fisheries logbook program in 1990, which provides a means of estimating the distribution of the reported catches by gear for that period. The distributions of the reported catches by gear from the coastal fisheries logbook program are presented in Table 8. The distributions by gear from the LDWF trip ticket program (2000 - 2002) are also presented in Table 8. The distributions for the two program are very similar, which suggests that the logbook data should provide reasonable estimates of the distribution by gear for the landings during 1990 - 1999.

Some red snapper landings are reported for shrimp otter trawl gear in 2001 - 2003. It is likely that these landings are catches that were made with handline gear by fishermen on shrimp boats. Because the red snapper were sold with the shrimp catch, all of the sales were reported as caught by trawl and therefore it is likely that the gear for the red snapper was incorrectly recorded on the trip ticket.

The distributions of the landings statistics between the eastern and western Gulf for the period 1962 - 1990 are presented in Table 9. These statistics show that almost none of the red snapper landed in Louisiana are caught in the eastern Gulf. Interestingly, the logbook data show a small shift in the fishing area for the reported catches to the eastern Gulf between 1990 and 1995 (Table 10). From 1996 through 2002, almost 100% of the landings in Louisiana are reportedly caught in the western Gulf. The fishing patterns are similar for both the LDWF trip ticket and the logbook data for 2000 - 2002 (Table 10).

Texas

As with the rest of the Gulf, the landings statistics were collected by federal port agents prior to 1977. The Texas Parks and Wildlife Department (TPWD) began collecting landings data from dealers in 1990 with a monthly reporting form (Monthly Marine Products Report, MMPR). Although the MMPR includes space for dealers to voluntarily report the type of gear,

few dealers submit this information. The distributions by gear for 1962 - 1992 are presented in Table 11. From 1964 through 1983, substantial red snapper landings were reported from shrimp trawls. Although it has not been confirmed, it is likely that these landings were caught by fishermen using handline gear while the shrimp boats were anchored. The mis-reporting is likely because the landings were sold as part of the shrimp boats' production, but were not actually caught by trawl gear.

The distribution of the catch by gear from the coastal fisheries logbook program are presented in Table 12. Because distributions by gear are not available from the general canvass data from 1992 on, the only option is to use the distributions reported to the logbook program.

Because the distributions of red snapper landings by fishing area are almost exclusively for the western Gulf, the data are not presented. There are a few thousand pounds reported for areas outside the Gulf of Mexico by the logbook programs, but these are not considered significant and not included.

III. Summary

The issues that need to be resolved are:

1. Should the logbook data be used for both gear and area distributions for the period 1990 - present and completely replace the distributions where they currently are available in the general canvass data?
2. Should the logbook data be used for the gear or area distributions for the period 1990 - present and the distributions available in the general canvass data used instead of the logbook distributions? The most likely scenario is that the gear distributions from the general canvass data would be used and the area of catch from the logbook data would be used.
3. For the period 1977 - 1985, decide whether the distribution of landings by gear and fishing area from the annual general canvass are acceptable for the landings in Florida. Can the percentages for the annual distributions be applied to the monthly landings data for this period for Florida?
4. Are gear and fishing area data available for Florida landings for the period 1985 through 1996 from the Florida trip ticket program? The SEFSC has the trip ticket data for 1997 - 2002, but does not have the trip ticket data for the earlier years.
5. Is there any alternative to the SEFSC coastal fisheries logbook data for landings in Louisiana for the period 1990 - 1999? Should the distributions from the logbook data be accepted?
6. Should the red snapper landing that are reported as being caught by shrimp otter trawl gear reported in the Louisiana trip ticket data be altered? That is, should any of the red

snapper landings be assigned to shrimp trawl or should all of these landings be assigned to handline gear?

7. Should the red snapper landing by shrimp otter trawl gear reported in the general canvass data for Texas during 1964 - 1983 be adjusted? I.e., should any of these landings be assigned to shrimp trawl gear or should they be assigned to handline gear?
8. Should the distribution of the catch by gear reported by the coastal fisheries logbook be used for the landings data for Texas during 1990 - 2002?

Table 3. Distribution of red snapper landings by gear categories for the Florida west coast, 1962 - 1996.*

Year	Shrimp Trawl	Traps and Pots	General Handline	Bandit Rigs	Bottom Longline	Unknown	Other
1962	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1963	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	98.8	0.0	0.0	1.2	0.0
1965	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1966	0.1	0.0	99.9	0.0	0.0	0.0	0.0
1967	0.1	0.0	99.9	0.0	0.0	0.0	0.0
1968	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1969	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1970	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1973	1.7	0.0	98.3	0.0	0.0	0.0	0.0
1974	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1975	0.5	0.0	99.5	0.0	0.0	0.0	0.0
1976	2.1	0.0	97.9	0.0	0.0	0.0	0.0
1977	0.7	0.0	99.3	0.0	0.0	0.0	0.0
1978	0.3	0.9	98.8	0.0	0.0	0.0	0.0
1979	0.1	0.2	99.7	0.0	0.0	0.0	0.0
1980	0.4	0.1	95.3	0.0	4.1	0.0	0.0
1981	0.4	0.3	93.2	0.0	6.1	0.0	0.0
1982	0.4	0.0	92.1	0.0	7.5	0.0	0.0
1983	0.4	0.0	87.3	0.0	12.3	0.0	0.0
1984	0.1	0.0	82.2	0.0	17.6	0.0	0.1
1985	0.1	0.2	87.0	0.0	12.6	0.0	0.2
1986	0.1	0.2	81.3	0.0	17.3	1.0	0.1
1987	0.0	0.0	85.0	0.0	14.8	0.1	0.1
1988	0.0	0.0	81.6	0.0	12.6	5.8	0.0
1989	0.0	0.1	87.2	0.0	11.3	1.3	0.1
1990	0.0	0.2	85.0	0.2	9.4	4.9	0.3
1991	0.0	0.5	86.5	2.2	4.6	5.3	0.9
1992	0.1	0.3	92.3	1.1	4.5	0.3	1.5
1993	0.0	0.5	78.0	2.6	3.7	13.9	1.3
1994	0.0	0.5	73.1	1.2	1.0	22.1	2.2
1995	0.0	0.1	87.5	0.0	2.2	6.6	3.5
1996	0.0	0.0	95.2	0.0	2.6	0.0	2.3

Source: Southeast Fisheries Science Center, General Canvass Annual Landings Statistics, Miami, FL 33149

Table 4. Comparison of the percent distribution by gear category for the landings statistics and the logbook data for the Florida west coast, 1993 - 2003*

Year	Otter Trawl	Trap/Pot Gear		General Handline		Bandit Rig		Bottom Longline		Other Gear		Unknown
	Landings	Landings	Logbook	Landings	Logbook	Landings	Logbook	Landings	Logbook	Landings	Logbook	Landings
1990	0.0	0.0	1.0	85.0	89.1	0.2	0.0	9.4	9.7	0.3	0.1	4.9
1991	0.0	0.1	0.6	86.5	95.8	2.2	0.0	4.6	3.6	0.9	0.1	5.3
1992	0.0	0.0	1.0	92.3	97.9	1.1	0.0	4.5	0.8	1.5	0.3	0.3
1993	0.0	0.5	1.2	78.0	94.4	2.6	0.0	3.7	4.0	1.3	0.4	13.9
1994	0.0	0.5	1.0	73.1	97.1	1.2	0.0	1.0	1.6	2.2	0.3	22.1
1995	0.0	0.1	0.0	87.5	94.5	0.0	0.0	2.2	5.3	3.5	0.1	6.6
1996	0.0	0.0	0.0	95.2	96.3	0.0	0.0	2.6	3.6	2.3	0.1	0.0
1997	0.1	0.1	0.6	92.9	96.3	0.0	0.0	6.8	3.1	0.1	0.0	0.0
1998	0.0	0.1	0.2	97.2	97.8	0.0	0.0	2.5	1.7	0.1	0.3	0.1
1999	0.0	0.2	3.4	88.2	94.8	0.0	0.0	10.5	1.5	0.2	0.2	0.9
2000	0.0	0.4	0.2	91.1	97.0	3.3	0.0	3.3	2.2	0.1	0.6	1.8
2001	0.0	0.3	0.3	86.3	95.5	5.4	2.3	2.5	1.6	0.2	0.3	5.3
2002	0.0	0.1	0.1	84.8	42.2	6.1	55.8	1.3	1.7	0.0	0.2	7.7
2003	0.0	0.0	0.0	65.5	22.7	20.8	75.4	1.2	1.7	0.1	0.1	12.5

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics and the Coastal Fisheries Logbook Data, Miami, FL 33149.

Table 5. Distribution of red snapper landings for the eastern and western Gulf of Mexico and South Atlantic for landings on Florida west coast, 1962-1996.*

Year	Eastern Gulf	Western Gulf	South Atlantic
1962	99.8	0.0	0.2
1963	45.6	54.1	0.3
1964	48.5	51.4	0.1
1965	53.6	46.2	0.2
1966	48.0	51.2	0.8
1967	46.9	52.3	0.8
1968	48.5	50.9	0.6
1969	46.8	52.4	0.8
1970	47.7	51.3	1.0
1971	47.7	51.9	0.5
1972	52.8	47.2	0.0
1973	56.2	43.2	0.6
1974	66.4	33.1	0.5
1975	64.7	34.8	0.6
1976	67.0	32.0	0.9
1977	62.6	36.5	0.9
1978	60.8	38.8	0.4
1979	63.3	36.7	0.0
1980	57.8	41.7	0.5
1981	58.1	41.7	0.2
1982	58.7	41.0	0.3
1983	57.7	42.2	0.1
1984	63.7	36.2	0.1
1985	66.8	33.2	0.0
1986	73.6	26.3	0.1
1987	70.9	28.8	0.3
1988	63.7	36.1	0.2
1989	65.6	34.3	0.1
1990	72.9	27.1	0.0
1991	70.3	29.7	0.0
1992	78.2	21.7	0.1
1993	82.0	17.9	0.2
1994	75.6	24.3	0.1
1995	94.2	3.9	1.9
1996	97.9	1.7	0.4

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics, Miami, FL 33149

Table 6. Distribution of red snapper landings and reported catch from the general canvass and logbook data for the Florida west coast, 1990 - 1996.*

Year	Eastern Gulf of Mexico		Western Gulf of Mexico		South Atlantic	
	Landings	Logbook	Landings	Logbook	Landings	Logbook
1990	72.9	56.7	27.1	43.3	0.0	0.0
1991	70.3	51.8	29.7	48.2	0.0	0.0
1992	78.2	49.0	21.7	51.0	0.1	0.0
1993	82.0	81.6	17.9	18.4	0.0	0.0
1994	75.6	92.3	24.3	7.7	0.0	0.0
1995	94.2	61.6	3.9	38.4	0.0	0.0
1996	97.9	77.4	1.7	22.6	0.4	0.0
1997	98.2	52.5	1.6	47.5	0.2	0.0
1998	99.1	89.7	0.7	10.1	0.3	0.2
1999	92.2	83.5	7.7	16.5	0.1	0.0
2000	98.0	86.3	1.8	13.6	0.2	0.1
2001	99.0	93.8	0.3	6.2	0.7	0.0
2002	99.2	96.3	0.2	3.7	0.6	0.0
2003	99.2	94.9	0.2	5.1	0.6	0.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics and Coastal Fisheries Logbook Program, Miami, FL 33149. Note, the percent for the Landings data are from the Florida annual general canvass for 1990-1996, and from the trip ticket data for 1997 - 2003.

Table 7. Distribution of red snapper landings by gear category for Louisiana, 1962 - 1989.*

Year	Shrimp otter trawls	Traps/Pot Gear	General Handline	Bandit Rigs	Bottom Longline	Other Gear	Unidentified
1962	0.0	0.0	75.3	0.0	0.0	24.7	0.0
1963	0.0	0.0	79.7	0.0	0.0	20.3	0.0
1964	20.6	0.0	79.4	0.0	0.0	0.0	0.0
1965	38.3	0.0	61.7	0.0	0.0	0.0	0.0
1966	57.4	0.0	42.6	0.0	0.0	0.0	0.0
1967	60.7	0.0	39.3	0.0	0.0	0.0	0.0
1968	48.1	0.0	51.9	0.0	0.0	0.0	0.0
1969	53.7	0.0	46.3	0.0	0.0	0.0	0.0
1970	88.7	0.0	11.3	0.0	0.0	0.0	0.0
1971	82.7	0.0	14.8	0.0	0.0	2.5	0.0
1972	75.9	0.0	24.1	0.0	0.0	0.0	0.0
1973	49.7	0.0	50.3	0.0	0.0	0.0	0.0
1974	39.3	0.0	60.7	0.0	0.0	0.0	0.0
1975	75.0	0.0	25.0	0.0	0.0	0.0	0.0
1976	95.7	0.0	2.5	0.0	0.0	1.9	0.0
1977	66.0	0.0	33.9	0.0	0.0	0.1	0.0
1978	58.3	0.0	41.7	0.0	0.0	0.0	0.0
1979	26.8	0.0	73.2	0.0	0.0	0.0	0.0
1980	29.5	0.0	70.5	0.0	0.0	0.0	0.0
1981	15.1	0.0	83.8	0.0	1.1	0.0	0.0
1982	10.2	0.0	89.4	0.0	0.4	0.0	0.0
1983	16.7	0.0	83.3	0.0	0.0	0.0	0.0
1984	8.9	0.0	85.2	0.0	5.9	0.0	0.0
1985	4.6	0.0	94.1	0.0	1.3	0.0	0.0
1986	1.6	0.0	90.3	0.0	8.1	0.0	0.0
1987	0.6	0.0	83.8	0.0	15.7	0.0	0.0
1988	0.5	0.0	98.3	0.0	1.2	0.0	0.0
1989	1.0	0.0	98.8	0.0	0.3	0.0	0.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics, Miami, FL 33149.

Table 8. Distribution of red snapper landings and reported catches from the general canvass and logbook data for Louisiana, 1990 - 2003.*

Year	Trawl	Traps/Pot Gear		Uniden.								
	Landings	Landings	Logbook	Landings								
1990	0.0	0.0	0.0	0.0	93.6	0.0	0.0	0.0	6.3	0.0	0.0	100.0
1991	0.0	0.0	0.0	0.0	94.6	0.0	0.0	0.0	5.3	0.0	0.1	100.0
1992	0.0	0.0	0.0	0.0	98.9	0.0	0.0	0.0	1.0	0.0	0.2	100.0
1993	0.0	0.0	0.1	0.0	99.2	0.0	0.0	0.0	0.4	0.0	0.5	100.0
1994	0.0	0.0	0.0	0.0	99.3	0.0	0.0	0.0	0.2	0.0	0.5	100.0
1995	0.0	0.0	0.0	0.0	99.6	0.0	0.0	0.0	0.3	0.0	0.1	100.0
1996	0.0	0.0	0.0	0.0	99.6	0.0	0.0	0.0	0.3	0.0	0.1	100.0
1997	0.0	0.0	0.0	0.0	98.7	0.0	0.0	0.0	0.2	0.0	1.2	100.0
1998	0.0	0.0	0.0	0.0	98.7	0.0	0.0	0.0	0.6	0.0	0.7	100.0
1999	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
2000	0.0	0.0	0.0	50.3	95.9	45.7	0.0	3.8	4.1	0.2	0.0	0.0
2001	0.2	0.0	0.0	42.2	93.3	54.7	4.2	2.7	2.3	0.2	0.1	0.0
2002	0.5	0.0	0.0	39.4	39.7	54.7	55.9	3.7	4.3	1.6	0.0	0.0
2003	1.2	0.0	0.0	50.0	17.8	46.5	81.5	1.5	0.6	0.8	0.1	0.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics and Coastal Fisheries Logbook Program, Miami, FL 33149

Table 9. Distribution of red snapper landings for the eastern and western Gulf of Mexico for landings in Louisiana, 1962-1990.*

Year	Eastern Gulf of Mexico	Western Gulf of Mexico
1962	0.0	100.0
1963	0.0	100.0
1964	0.0	100.0
1965	0.0	100.0
1966	0.0	100.0
1967	0.0	100.0
1968	0.0	100.0
1969	0.2	99.8
1970	0.4	99.6
1971	0.2	99.8
1972	0.6	99.4
1973	0.8	99.2
1974	0.0	100.0
1975	0.2	99.8
1976	0.1	99.9
1977	0.0	100.0
1978	0.0	100.0
1979	0.0	100.0
1980	0.0	100.0
1981	0.0	100.0
1982	0.0	100.0
1983	0.0	100.0
1984	0.5	99.5
1985	0.8	99.2
1986	1.2	98.8
1987	0.4	99.6
1988	0.1	99.9
1989	0.0	100.0
1990	0.0	100.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics, Miami, FL 33149

Table 10. Distribution of red snapper landings and reported catch from the general canvass and logbook data in Louisiana, 1990 - 2003.*

Year	Eastern Gulf of Mexico		Eastern Gulf of Mexico		Uniden.
	Landings	Logbook	Landings	Logbook	Landings
1990	0.0	14.2	100.0	85.8	0.0
1991	0.0	17.1	100.0	82.9	0.0
1992	0.0	8.3	0.0	91.7	100.0
1993	0.0	18.3	0.0	81.7	100.0
1994	0.0	12.0	0.0	88.0	100.0
1995	0.0	8.9	0.0	91.1	100.0
1996	0.0	1.2	0.0	98.8	100.0
1997	0.0	1.3	0.0	98.7	100.0
1998	0.0	3.4	0.0	96.6	100.0
1999	0.0	2.1	0.0	97.9	100.0
2000	0.1	1.2	99.9	98.8	0.0
2001	0.4	2.0	99.6	98.0	0.0
2002	0.3	0.3	99.7	99.7	0.0
2003	0.0	0.4	100.0	99.6	0.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics and Coastal Fisheries Logbook Program, Miami, FL 33149

Table 11. Distribution of red snapper landings by gear category for Texas, 1962 - 1992.*

Year	Shrimp Trawls	General Handline	Bottom Longline	Unidentified	Other Gear
1962	0.0	98.1	0.0	0.0	1.9
1963	0.0	97.5	0.0	0.0	2.5
1964	5.2	94.8	0.0	0.0	0.0
1965	3.8	96.2	0.0	0.0	0.0
1966	5.2	94.8	0.0	0.0	0.0
1967	7.9	92.1	0.0	0.0	0.0
1968	7.2	92.8	0.0	0.0	0.0
1969	16.0	84.0	0.0	0.0	0.0
1970	15.2	84.8	0.0	0.0	0.0
1971	14.5	85.5	0.0	0.0	0.0
1972	16.0	84.0	0.0	0.0	0.0
1973	16.2	83.8	0.0	0.0	0.0
1974	15.4	84.6	0.0	0.0	0.0
1975	6.8	93.2	0.0	0.0	0.0
1976	6.6	93.4	0.0	0.0	0.0
1977	27.5	72.5	0.0	0.0	0.0
1978	0.0	0.0	0.0	100.0	0.0
1979	0.0	0.0	0.0	100.0	0.0
1980	66.1	0.0	0.0	33.9	0.0
1981	28.3	0.0	0.0	71.7	0.0
1982	58.3	0.0	0.0	41.7	0.0
1983	38.6	0.0	0.0	61.4	0.0
1984	1.7	24.6	73.7	0.0	0.0
1985	0.5	24.3	75.2	0.0	0.0
1986	1.0	19.7	77.4	0.0	1.9
1987	1.2	24.3	74.4	0.0	0.0
1988	4.5	22.4	73.1	0.0	0.0
1989	2.3	12.5	85.2	0.0	0.0
1990	0.7	18.6	80.7	0.0	0.0
1991	0.5	19.8	79.7	0.0	0.0
1992	0.2	28.5	71.4	0.0	0.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics, Miami, FL 33149.

Table 12. Distribution of red snapper landings and reported catches from the general canvass and logbook data for Texas, 1990 - 2003.*

Year	Trawl	General Handline		Bandit Rig Gear		Bottom Longline		Unidentifie	Other
	Landings	Landings	Logbook	Landings	Logbook	Landings	Logbook	Landings	Landings
1990	0.7	18.6	90.3	0.0	0.0	80.7	9.7	0.0	0.0
1991	0.5	19.8	96.7	0.0	0.0	79.7	3.3	0.0	0.0
1992	0.2	28.5	98.0	0.0	0.0	71.4	0.8	0.0	1.2
1993	0.0	0.0	98.6	0.0	0.0	0.0	1.2	100.0	0.2
1994	0.0	0.0	98.4	0.0	0.0	0.0	1.6	100.0	0.0
1995	0.0	0.0	98.8	0.0	0.0	0.0	1.2	100.0	0.0
1996	0.0	0.0	94.9	0.0	0.0	0.0	1.6	100.0	3.6
1997	0.0	0.0	95.6	0.0	0.0	0.0	1.6	100.0	2.9
1998	0.0	0.0	97.7	0.0	0.0	0.0	0.9	100.0	1.5
1999	0.0	0.0	93.0	0.0	0.0	0.0	7.0	100.0	0.0
2000	0.0	0.0	95.1	0.0	0.0	0.0	4.9	100.0	0.1
2001	0.0	0.0	85.8	0.0	9.2	0.0	5.0	100.0	0.0
2002	0.0	0.0	41.3	0.0	54.9	0.0	3.9	100.0	0.0
2003	0.0	0.0	20.7	0.0	70.1	0.0	9.2	100.0	0.0

Source: Southeast Fisheries Science Center, General Canvass Landings Statistics and Coastal Fisheries Logbook Program, Miami, FL 33149