COASTAL ZONE MANAGEMENT

CM - 287

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STATE OF FLORIDA
COASTAL MANAGEMENT PROGRAM

COASTAL PELAGICS SURVEY RESEARCH
CM - 287

MARINE FISHERIES COMMISSION
2540 EXECUTIVE CENTER CIRCLE, WEST
SUITE 106
TALLAHASSEE, FLORIDA 32301

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COASTAL PELAGICS SURVEY RESEARCH

BACKGROUND INFORMATION

The Marine Fisheries Commission enacts management plans to ensure the conservation of marine species. These management plans include background data and reports, a findings of fact document, and other documents required for agency rulemaking. The policies and standards of the Commission (Section 370.025, F.S.) establish conservation as the paramount goal. However, Commission rule making is also to provide for optimum sustained benefits and use to all the people of the state.

Fishery management regulations for the coastal pelagic species, the mackerels, were first prepared by the federal councils in 1982. In retrospect the management plan did not address any of the real problems of overfishing which began to occur during the mid-seventies off the coast of Florida. During 1984 the newly created Florida Marine Fisheries Commission enacted rules regulating the taking of king mackerel. By 1986 the State had enacted substantial harvest restrictions for Spanish mackerel and succeeded in convincing the two federal councils to enact an emergency rule to stop fishing in the federal zone (exclusive economic zone) once the state quota was attained. The following year, federal plan amendment two was in place. The effect of the plan amendment was to establish federal quotas over the entire range of the various fisheries; these quotas in turn were derived from range and point estimates of acceptable biological catch (ABC) and total allowable catch (TAC), respectively. The result was to reverse the emerging management regime which allowed Florida to regulate the pace and allocation of the fishery. The fact that Florida representatives were leaders in the call for regulation of the pelagic fishery is not salutary. In spite of their wide ranging migrations along the continental shelf, hence the sobriquet coastal pelagic, the fishery and the problems in the fishery were, at that time, largely of Florida's making.

The problems of overfishing of the coastal pelagic species are not unusual. The species group includes king and Spanish mackerel, cobia, cero mackerel, Little tunny and dolphin with bluefish included in the Gulf of Mexico. The first two species have long been sought by recreational and commercial fishers. The now familiar **tragedy of the commons** described by G. Hardin also operates in the realm of fisheries. The technical explanation is that overexploitation of public resources occur because the factor cost to the individual firm does not equal the opportunity cost to society. Common property resources are nevertheless scarce goods to society but they are free goods, there for the taking, to individuals; this usually results in overexploitation since the usual leveling of demand and supply does not occur since one of the factors of production, i.e., natural resources such as land or

fish, labor, capital and entrepreneurial skill, is without a price or that price is limited to the cost of a license or permit.

Most of the management decisions made to date have been based on biological information which demonstrated growth overfishing or recruitment overfishing of a species or species complex. This approach has emphasized conservation, but has generally ignored the issue of optimum sustained benefits and use. Instead, allocation was established based on some average of the historical distribution of landings between recreational and commercial fishermen and between the various commercial fisheries. The concept of optimum benefit is a socio-economic concept which included consideration of the distribution of fishery resources. For any given species, there are a variety of demands: reproduction and growth (maximum sustained yield), aesthetics, food chain contribution, and commercial and recreational harvest. Man's uses can be further subdivided into nearshore versus offshore, directed versus bycatch, frozen versus fresh, tourist versus resident, etc. This distribution of the resource is referred to in fisheries management jargon as the allocation of the resource. In an economic sense, allocation to each sector (use) based on the highest marginal value would result in optimum sustained benefits and use.

Unfortunately, much of the information necessary to make allocation decisions is either unavailable or dated. Therefore, the need for timely social and economic data is critical to Commission decision making. Such information is not generally available from other sources, but must be specifically collected to determine social and economic impacts, economic values placed on the resource by different groups, market demand for different product forms, and the identification of import and export channels. This project will use survey research to address allocation questions for the coastal pelagics, specifically the mackerels: Spanish and kings.

East Coast Spanish mackerel provide some examples of not only the typical recreational-commercial allocation conflict, but also a north-south geographical allocation problem. During the 1950's, Spanish mackerel were abundant during winter all along the Southeast Coast, and Dade County was the leading commercial producer. However, the fisheries leapfrogged northward to Jupiter during the 1960's, and then to Ft. Pierce in the 1970's, probably because northern-most fishermen had a locational advantage intercepting the southbound migration moving along the narrow corridor between mainland Florida and the Gulf Stream current. There has been a dearth of Spanish mackerel from Palm Beach to Dade County during the last 15 to 20 years. recent Commission regulation will try to solve that problem by controlling fishing pressure early in the season to allow some fish to pass the intensive fisheries around Ft. Pierce.

Another allocation problem became apparent following the imposition of quotas three years ago, the problem being that the quotas have put the fishery in a "hurry up" mode as fishermen intensify their efforts to ensure that they get their fair share of the quota. In each of the last four years, the entire Southeast Coast quota has been taken in about two weeks of intensive fishing (Figure 1). Fifteen years ago, the same fishery took five or six months. The two week fishery results in a glut production that strains fish house and results in most of the product going to the freezer at the expense of the traditional fresh markets.

SURVEY RESULTS

Florida's management plan for Gulf king mackerel is framed by the federal quota established for the Eastern Zone of the Gulf group. Federal management is based on a quota that allocates 68% to the recreational fishery and 32% to the commercial fishery. Those amounts are then further divided into the Eastern (Florida) and Western zones. This results in 1,270,000 pounds of commercial quota for the Eastern Zone for the 1991-92 fishing year.

The commercial and recreational fisheries for king mackerel have been described in a number of sources. The trends in commercial landings of king mackerel in Florida over the past 40 years are evident as was the case in Spanish mackerel, i.e., three epochs of fishing. The first, until the late sixties, the second, pre-regulation, and finally, landings under a system of quotas.

Information about landings by gear type has been estimated by NMFS for the entire period of record. However the NMFS data is not sufficient to provide price information by gear type or season. The East Coast fishery is predominately a hook and line fishery and was an important component of the charterboat fisheries annual income, whereas West Coast landings were dominated by gill net fisheries and are centered in Monroe County.

Statistics on the origin of commercial catches indicate that the fishery is predominately in Florida, while 84% of the catch is taken in the area beyond three nautical miles from shore. Estimates of the number of watercraft in the fishery lack precision due to the multi-species nature of the pelagics fishery. Therefore, numbers and levels of effort are difficult to gauge. However, the number of hook and line vessels in the industry have shown a marked decline. The decline occurred prior to the imposition of quotas, which allows speculation of whether anticipated quotas or declining fishing conditions were the cause.

Because of the aggregating behavior of the fish, hook and line fishermen have had the advantage of a longer season than gill net fisherman. When price flexibility equations were estimated, in an

attempt to gauge the effects of regulatory catch reductions on revenues, only East Coast data was significant. The inference is that, aside from the mainstream markets that have historically shipped 60% of Florida landings to Fulton Fish Market, N.Y., N.Y. well-established markets (so-called efficient markets) do not exist. The establishment of quotas exacerbated this situation because large catches close the quota prior to the historical end of the fishery, which further attenuates the supply of an already seasonal fishery.

Recently developed survey information suggests that the markets still exist, but that the market channels have shifted to imported products. Trends for comparing landings and imports indicate that imports from 1980 until 1983 were less then 500,000 pounds. It appears that imports are being used to supplement declining landings and that imports are used during the season when quotas have closed.

The current management controversey is the result of two basic issues: (1) annual changes in the amount of allowable harvest that result from estimates of annual yield consistent with the long-term recovery of the fishery and (2) problems that occurred last year in monitoring the East Coast quota.

The commercial fishery is largely a Florida fishery. It has been characterized both historically and contemporarily by numerous reports. The latest estimates of the stock assessment panel concluded that both stocks are still below the biomass targets deemed necessary to ensure recovery from historical recruitment overfishing.

The East Coast fishery was centered in the Northeast U.S. during the latter nineteenth and early twentieth centuries, but by 1920 the fishery was concentrated in south Florida. Gill nets are the predominate gear form, while Florida landings account for over 85% of the total harvest.

The recent history of the fishery has been characterized by Williams as a leapfrogging of the industry toward Cape Canaveral from south Florida in an attempt to gain a locational advantage to first intercept the migrating fish. This has resulted from the introduction of deep water gill nets, 300 meshes deep, from vessels with a hold capacity in excess of 50,000 pounds. The introduction of such vessels during the 1970's moved the fishery further offshore, created a freezer fillet industry, and further contributed to recruitment overfishing.

Management measures to reverse the declines in spawning stock biomass were first initiated in the 1986-87 fishing year. The commercial fishery was managed through the use of quotas which further exacerbated the pace of fishing effort as each firm

attempted to garner the largest possible portion of the quota. Testimony during the January workshop in Ft. Pierce described 14 large vessels and 150 small watercraft (20-34 feet). However, an estimate of small boats based on trip tickets concluded that 58 were active on the East Coast.

The West Coast of Florida landed over 95% of the Gulf of Mexico catch during the 1989-90 season. Commercial harvest was below both the state and federal quotas for the first time. In fact, in prior years, quotas were landed in the Southwest Region prior to any significant Northwest Region harvest. Lack of demand from Florida Keys markets were cited. However, testimony from some wholesalers indicated ex-vessel prices of $.75/lb. for fresh fish in whole form.

Annual quota changes are based on the decisions made by the South Atlantic and Gulf of Mexico Federal Fishery Management Councils. These harvest limits are imposed to ensure stock recovery and sustained yield.

Problems in the management of the East Coast fishery were identified during the 1989/90 fishing season. The Spanish mackerel Rule (46-23, F.A.C.) approved by the Commission in September 1989 attempted to reserve 10% (260,000 lbs.) of the East Coast quota (2,600,000 lbs.) to be harvested at the end of the season under 1,500 lb. daily vessel limits. The basis of the 10% reserve was: (1) to slow down commercial harvest and allow the Department of Natural Resources (DNR) to close the fishery in an orderly manner without exceeding the quota; (2) to reserve a small amount of fish to small-scale harvesters; and (3) to reserve some fish for fresh markets.

The rule did not achieve its intention of reserving the last 10%, and virtually the entire quota was captured during the unlimited phase of harvest. On December 20, DNR determined that 90% of the quota had been captured following a catch of 458,000 pounds on December 19, and they then issued an order to close the fishery to unlimited harvest effective 12:01 AM on December 21, 1989. However, on December 20, as they were calculating the previous day's catch and obtaining an order to reduce harvest to 1,500 lbs. per day, the fishery produced an additional 474,000 lbs. By the morning of December 21, it was apparent that the 90% of the quota (2.34 million pounds), as well as the 2.6 million pound quota, had been reached. DNR then closed the 1,500 lb. segment at noon on December 21. Thus, the 1,500 lb. daily vessel limit applied for only 12 hours, after which time boats became subject to the state's 500 lb. exception.

The lack of a 1,500 lb. daily vessel limit season has generated considerable anger within the commercial sector. Smaller boat operators in particular claim to have suffered excessively during

each of the four seasons since the quota has been in place. Small boat operators' incomes depended on a smaller unit of effort applied over a longer time period, compared to the large vessels which have very high harvest capacity (up to 50,000 lbs./trip) and needed fewer fishing days to have a good income. Since the advent of the quota, the winter season has only lasted about two weeks once the mackerel migration arrives south of Cape Canaveral. In each of the last three years, the season has been closed in December, three months before the historical end of the season.

There were 819 commercial permits issued for Gulf Spanish mackerel in 1988-89. The comparable number for Atlantic group was 1,242. The total watercraft in the fishery include 47 vessels and up to 237 smaller craft in all states. Of the total licenses in the fishery, 513 were active in the East Coast region, 256 in the Northwest, and 945 in Southwest Florida. During 1987/88, 374 SPLs accounted for 91% of the harvest. A detailed breakdown of landings by region, by trip size, by season for the 1989/90 fishing year.

A tabulation of wholesale dealers used to derive the survey questionnaires is also attached, the chart lists the number of wholesalers categorized by the number of purchases that included king mackerel with a second for Spanish mackerel.

The recreational fishery occurs on both coasts. Socio-economic characteristics of such fishermen were evaluated in Hiett, 1983 and have been described by others. Preliminary MRFSS data indicate catches by all modes of fishing: private boat (70%), shore (18%), party/charter (12%), in the south Atlantic and 81%, 17% and 2% respectively in the Gulf of Mexico. Florida catch rates show a great deal of variability. Reported catch and harvest in numbers of fish totalled 304,000 and 279,000 by East Coast anglers and 2,159,000 and 1,437,000 for Gulf Coast anglers. During the last fishing year, East Coast anglers exceeded the quota, while Gulf Coast anglers did not reach their quota limit.

There are 1,100 charter and party boats in Florida in addition to the support services that are indirectly affected by management decisions. The number of anglers who target or catch mackerel range from 100,000 to 300,000 anglers taking 700,000 trips. These figures are based on a three year average. The recreational fishery was not included in the survey analysis aside from the charter/head boat portion of the questionnaire. The distribution of anglers who target and catch mackerels is such that using the recreational fishing license file to canvass anglers who result in biased results. Therefore the MFC has contracted seperately with researchers from the University of Florida in order to obtain a regionally stratified random sample of all anglers, using the information obtained from the MRFSS telephone survey of 40,000 Florida households.

During the last fishing year, the Gulf quota has not been reached. However, during the previous fishing year, the quota was caught before the spring fishing season in southwest Florida, so the NWR did not receive an equitable allocation of the Gulf quota. The size of the benefit will be at least 56% of the NWR quota or $94,000, ex-vessel.

This proposed measure would enact a landing law for the NWR so trip limits could be enforced regardless of the origin of the catch, i.e., state or federal waters. This is consistent with previous Commission action in the other regions. Table 3.03 provides an extensive tabulation of landings by trip size, by region, and by season. While no single fishing year can be considered representative, the data does indicate the preponderance of smaller trip size production in that region.

The benefit of the measure is considered to be twofold: (1) an enforceable 1,500 pound trip limit will enable quota monitoring to keep pace with landings, and (2) the trip limit will spread the quota to more fishermen for a longer time period. Harvests beyond the established quotas create regional allocation problems and extend the long-term catch reductions necessary to reach spawning stock biomass goals. Benefit/cost figures cannot be associated with this measure because time periods for stock recovery at various levels of ABC are not available.

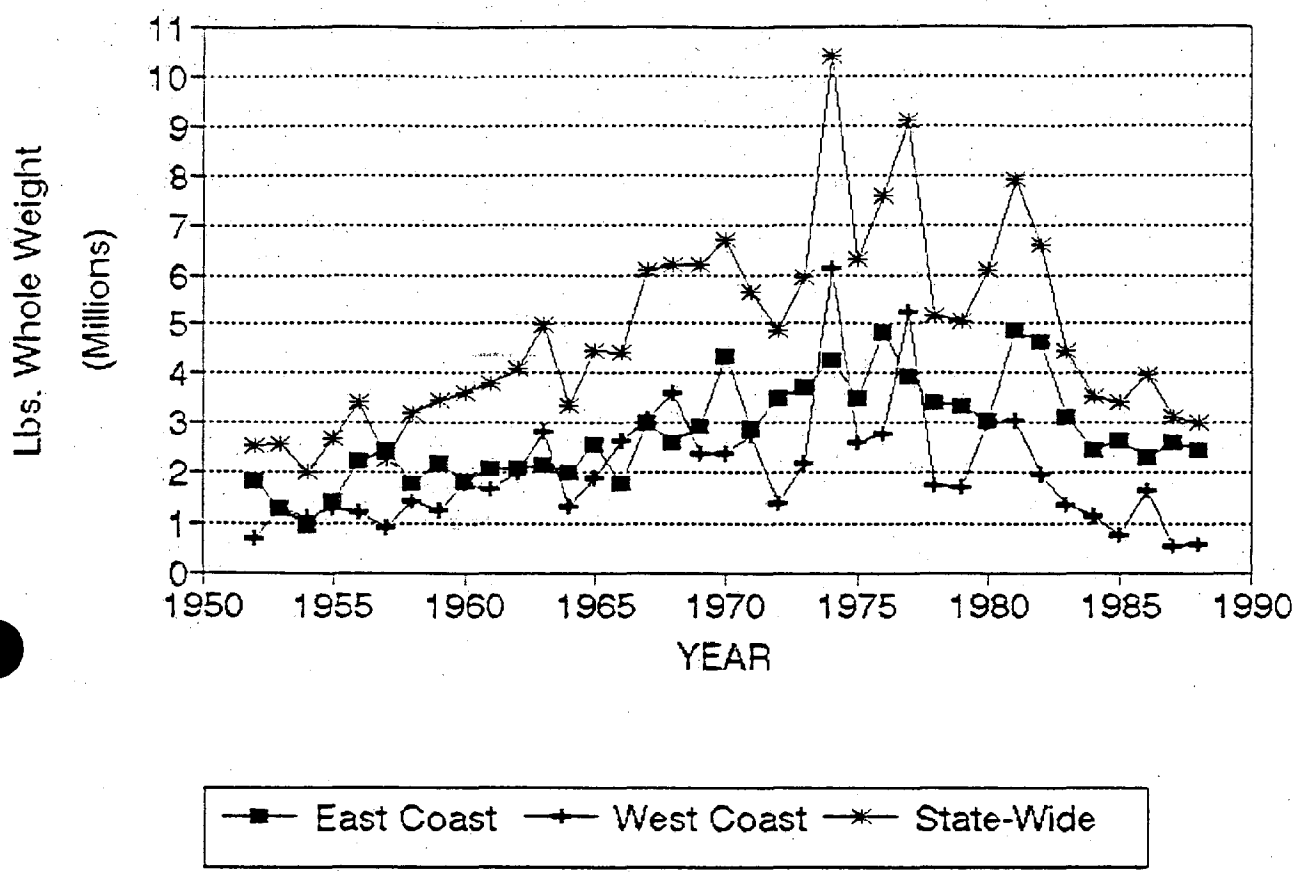
The cost of the measure will be to the harvesting sector, when the federal quota is open and the state landing law is 1,500 pounds. Then craft with capacity in excess of 1,500 pounds will have higher costs per return, then if they were only regulated by quotas. From 1985 to 1990, 93% of all trips and 34% of landings have been from 1,500 pound or smaller trips, while the landing for the East and Southwest regions were 9% and 19%, respectively.

State quota numbers are derived from federal commercial quotas. Therefore, benefits or costs cannot be based on an unregulated alternative, since harvest limits are necessary to assure stock recovery and the long-term benefit of sustained yield. The estimate of MSY at recovery is 18 million pounds. Current TAC is 10.25 million pounds. The benefit of recovery would be as much as a 92% increase in commercial quotas.

The ECR commercial quota is being reduced by 500,000 pounds (20%) from the previous year, while the SWR is being increased by 20,000 pounds (1%) and the NWR is being increased by 80,000 pounds (20%). The result is a net reduction of 400,000 pounds, or $140,000 ex-vessel ($.35/lb.).

Commercial King Mackerel Landings

in Florida by Coast, 1952-1988

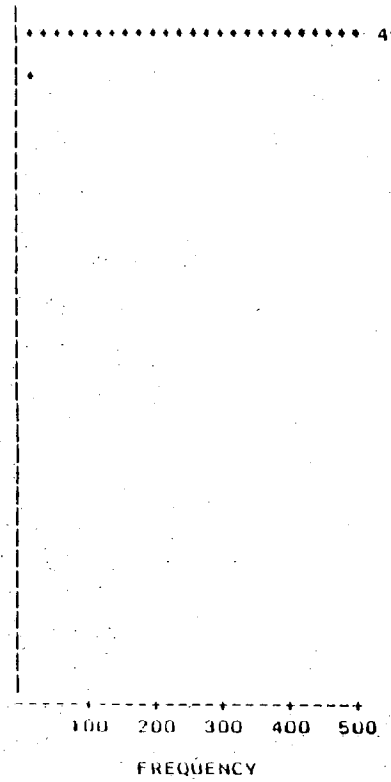


SPLS REPORTING SALES OF KING MACKEREL
BY THE NUMBER OF SALES(TRIPS) DURING THE
SFY 1988 - 1989

COAST:WEST COAST

FREQUENCY BAR CHART

MIDPOINT TRIPS	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
3	496	496	93.76	93.76
9	26	522	4.91	98.68
15	2	524	0.38	99.05
21	1	525	0.19	99.24
27	2	527	0.38	99.62
33	1	528	0.19	99.81
39	0	528	0.00	99.81
45	0	528	0.00	99.81
51	0	528	0.00	99.81
57	0	528	0.00	99.81
63	0	528	0.00	99.81
69	0	528	0.00	99.81
75	1	529	0.19	100.00
81	0	529	0.00	100.00
87	0	529	0.00	100.00
93	0	529	0.00	100.00



SPLS REPORTING SALES OF KING MACKEREL
BY THE NUMBER OF SALES(TRIPS) DURING THE
SPY 1988 - 1989

COAST=EAST COAST

FREQUENCY BAR CHART

MIDPOINT TRIPS		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
3	**********	219	219	77.11	77.11
9	******	44	263	15.49	92.61
15	**	13	276	4.58	97.18
21	*	7	283	2.46	99.65
27		1	284	0.35	100.00
33		0	284	0.00	100.00
39		0	284	0.00	100.00
45		0	284	0.00	100.00
51		0	284	0.00	100.00
57		0	284	0.00	100.00
63		0	284	0.00	100.00
69		0	284	0.00	100.00
75		0	284	0.00	100.00
81		0	284	0.00	100.00
87		0	284	0.00	100.00
93		0	284	0.00	100.00

30 60 90 120 150 180 210

FREQUENCY

THE TABULATION OF REPORTED COMMERCIAL TRIPS
WHEN GULF KING MACKEREL ARE CAUGHT, 1988-89
BAT02126 KING - FISHERY STATISTICS SECTION

		ALL		
		KING MACKEREL		
		TRIPS	LBS	PCT_LBS
COAST	LB_CLASS			
EAST COAST	0- 50	308	6613	0.71
	51- 100	158	11479	1.24
	101- 150	111	13824	1.49
	151- 200	75	12880	1.39
	201- 250	64	14251	1.54
	251- 300	49	13410	1.45
	301- 500	187	73202	7.89
	501- 750	125	75672	8.16
	751- 1000	59	50632	5.46
	1001- 5000	92	152884	16.48
	ALL	1228	424847	45.80
WEST COAST	LB_CLASS			
	0- 50	745	15851	1.71
	51- 100	210	14416	1.55
	101- 150	61	7296	0.79
	151- 200	24	4109	0.44
	201- 250	17	3770	0.41
	251- 300	7	1915	0.21
	301- 500	19	7494	0.81
	501- 750	8	4809	0.52

(CONTINUED)

THE TABULATION OF REPORTED COMMERCIAL TRIPS
WHEN KING MACKEREL ARE CAUGHT SHOWING TOTAL
LANDINGS WITH THE ASSOCIATED KING MACKEREL LBS

	COAST		
	WEST COAST		
	TOTAL LANDINGS		
	TRIPS	LBS	PCT_LBS
K_LB_CLASS			
0- 50	745	323666	21.73
51- 100	210	45250	3.04
101- 150	61	28262	1.90
151- 200	24	4577	0.31
201- 250	17	9306	0.62
251- 300	7	2107	0.14
301- 500	19	10442	0.70
501- 750	8	5412	0.36
751- 1000	1	1025	0.07
1001- 5000	9	15598	1.05
5001-10000	5	43476	2.92
10001-15000	6	73034	4.90
15000-20000	3	55333	3.71
GT 20000	10	255985	17.18
ALL	1125	873473	58.63

(CONTINUED)

THE TABULATION OF REPORTED COMMERCIAL TRIPS
WHEN KING MACKEREL ARE CAUGHT SHOWING TOTAL
LANDINGS WITH THE ASSOCIATED KING MACKEREL LBS

	COAST		
	EAST COAST		
	TOTAL LANDINGS		
K_LB_CLASS	TRIPS	LBS	PCT_LBS
0- 50	308	123941	8.32
51- 100	158	19559	1.31
101- 150	111	22343	1.50
151- 200	75	16369	1.10
201- 250	64	17270	1.16
251- 300	49	46524	3.12
301- 500	187	79592	5.34
501- 750	125	81105	5.44
751- 1000	59	52110	3.50
1001- 5000	92	157402	10.57
5001-10000	.	.	.
10001-15000	.	.	.
15000-20000	.	.	.
GT 20000	.	.	.
ALL	1228	616215	41.37

(CONTINUED)

THE TABULATION OF REPORTED COMMERCIAL TRIPS
WHEN KING MACKEREL ARE CAUGHT SHOWING TOTAL
LANDINGS WITH THE ASSOCIATED KING MACKEREL LBS

	ALL		
	TOTAL LANDINGS		
	TRIPS	LBS	PCT_LBS
K_LB_CLASS			
0- 50	1053	447607	30.05
51- 100	368	64809	4.35
101- 150	172	50605	3.40
151- 200	99	20946	1.41
201- 250	81	26576	1.78
251- 300	56	48631	3.26
301- 500	206	90034	6.04
501- 750	133	86517	5.81
751- 1000	60	53135	3.57
1001- 5000	101	173000	11.61
5001-10000	5	43476	2.92
10001-15000	6	73034	4.90
15000-20000	3	55333	3.71
GT 20000	10	255985	17.18
ALL	2353	1489688	100.00

SEAFOOD DEALERS BUYING GULF KINGS FROM
THE HARVESTING SECTOR, SFY 1988-89

COAST=WEST COAST

FREQUENCY BAR CHART

MIDPOINT PURCHASE		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
5	**********	68	68	68.00	68.00
10	****	8	76	8.00	76.00
15	***	5	81	5.00	81.00
20	**	3	84	3.00	84.00
25	**	4	88	4.00	88.00
30	*	2	90	2.00	90.00
35		0	90	0.00	90.00
40	*	1	91	1.00	91.00
45	*	1	92	1.00	92.00
50	*	2	94	2.00	94.00
55	*	1	95	1.00	95.00
60	*	1	96	1.00	96.00
65	*	1	97	1.00	97.00
70	*	1	98	1.00	98.00
75	*	1	99	1.00	99.00
80	*	1	100	1.00	100.00

```
-----+-----+-----+-----+-----+-----
    10    20    30    40    50    60
```

FREQUENCY

SEAFOOD DEALERS BUYING GULF KINGS FROM
THE HARVESTING SECTOR, SFY 1988-89

COAST=EAST COAST

FREQUENCY BAR CHART

MIDPOINT PURCHASE		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
5	**********	27	27	58.70	58.70
10	****	4	31	8.70	67.39
15	*	1	32	2.17	69.57
20	***	3	35	6.52	76.09
25	****	4	39	8.70	84.78
30		0	39	0.00	84.78
35		0	39	0.00	84.78
40		0	39	0.00	84.78
45	*	1	40	2.17	86.96
50		0	40	0.00	86.96
55		0	40	0.00	86.96
60		0	40	0.00	86.96
65		0	40	0.00	86.96
70	*	1	41	2.17	89.13
75	*	1	42	2.17	91.30
80	****	4	46	8.70	100.00

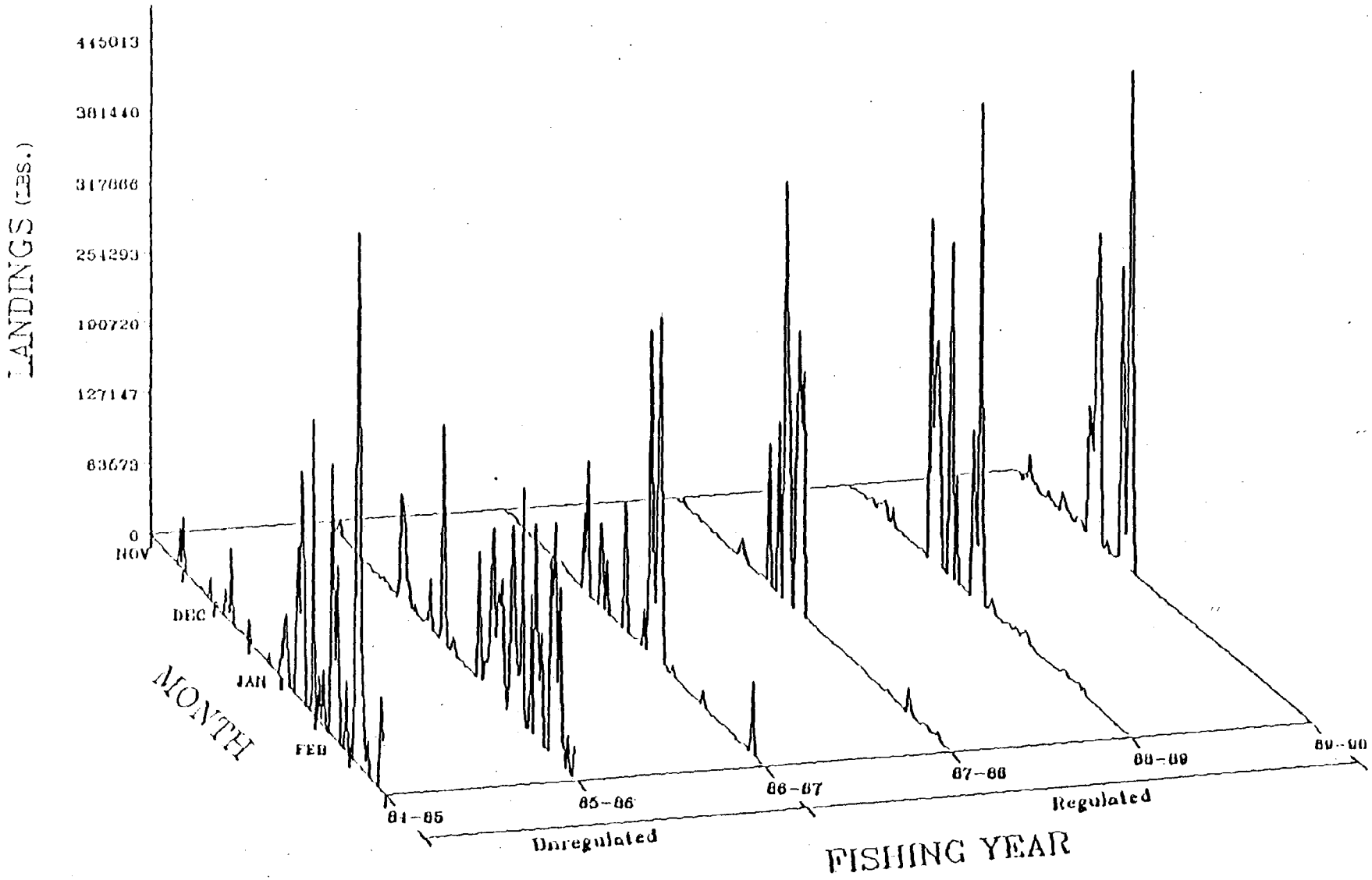
```
-----+----+----+----+----+--
     5   10   15   20   25
```

FREQUENCY

THE TABULATION OF REPORTED COMMERCIAL TRIPS
WHEN GULF KING MACKEREL ARE CAUGHT, 1988-89
BAT02126 KING - FISHERY STATISTICS SECTION

		ALL		
		KING MACKEREL		
		TRIPS	LBS	PCT_LBS
COAST	LB_CLASS			
WEST COAST	751- 1000	1	998	0.11
	1001- 5000	9	15273	1.65
	5001-10000	5	43476	4.69
	10001-15000	6	73034	7.87
	15000-20000	3	55333	5.97
	GT 20000	10	254918	27.48
	ALL	1125	502692	54.20

Spanish Mackerel Landings
Nov. – Feb.



[illegible] reproduced from Reference 11.

FIGURE 3.01. FMFC - ECONOMIC IMPACT REVIEW
CZM-FUNDED COST AND REVENUE SURVEY OF
MACKEREL FISHERMEN AND A MARKET CHANNEL
AND QUALITY STUDY OF SEAFOOD DEALERS

FREQUENCY OF NUMBER OF CREW (EXCLUDING CAPTAIN)

CREW MEMBERS MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
2	**********	440	440	95.65	95.65
4	*	16	456	3.48	99.13
6		1	457	0.22	99.35
8		0	457	0.00	99.35
10		2	459	0.43	99.78
12		1	460	0.22	100.00
14		0	460	0.00	100.00

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-----+----+----+----+--
    100  200  300  400
```

FREQUENCY

SEAFOOD DEALERS BUYING FROM THE
HARVESTING SECTOR FOR SFY 1989-90

AREA-EAST COAST

FREQUENCY BAR CHART

MIDPOINT SALES		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
5	**********	57	57	66.28	66.28
10	***	6	63	6.98	73.26
15	*	2	65	2.33	75.58
20	**	3	68	3.49	79.07
25	*	1	69	1.16	80.23
30	**	3	72	3.49	83.72
35	*	1	73	1.16	84.88
40		0	73	0.00	84.88
45		0	73	0.00	84.88
50	*	2	75	2.33	87.21
55		0	75	0.00	87.21
60		0	75	0.00	87.21
65		0	75	0.00	87.21
70		0	75	0.00	87.21
75	*	1	76	1.16	88.37
80	*****	10	86	11.63	100.00

10 20 30 40 50

FREQUENCY

SEAFOOD DEALERS BUYING FROM THE
HARVESTING SECTOR FOR SFY 1989-90

AREA=NORTHWEST COAST

FREQUENCY BAR CHART

MIDPOINT SALES		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
5	**********	31	31	51.67	51.67
10	*****	5	36	8.33	60.00
15	****	4	40	6.67	66.67
20	***	3	43	5.00	71.67
25	*	1	44	1.67	73.33
30	**	2	46	3.33	76.67
35	******	6	52	10.00	86.67
40	*	1	53	1.67	88.33
45		0	53	0.00	88.33
50		0	53	0.00	88.33
55	*	1	54	1.67	90.00
60		0	54	0.00	90.00
65		0	54	0.00	90.00
70	*	1	55	1.67	91.67
75	*	1	56	1.67	93.33
80	****	4	60	6.67	100.00

5 10 15 20 25 30

FREQUENCY

SEAFOOD DEALERS BUYING FROM THE
HARVESTING SECTOR FOR SFY 1989-90

AREA=SOUTHWEST COAST

FREQUENCY BAR CHART

MIDPOINT SALES		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
5	**********	41	41	37.96	37.96
10	******	12	53	11.11	49.07
15	**	3	56	2.78	51.85
20	*****	9	65	8.33	60.19
25	**	4	69	3.70	63.89
30	**	4	73	3.70	67.59
35	**	4	77	3.70	71.30
40	*	1	78	0.93	72.22
45	**	3	81	2.78	75.00
50		0	81	0.00	75.00
55	**	3	84	2.78	77.78
60	**	3	87	2.78	80.56
65	**	3	90	2.78	83.33
70		0	90	0.00	83.33
75	*	2	92	1.85	85.19
80	********	16	108	14.81	100.00

10 20 30 40

FREQUENCY

SPTS REPORTING SALES OF SPANISH MACKEREL
BY THE NUMBER OF SALES (TRIPS) DURING
THE SFY 1989 - 1990 FOR EACH REGION

AREA=NORTHWEST COAST

FREQUENCY BAR CHART

MIDPOINT SPTS		FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
3	**********	208	208	81.25	81.25
6	***	25	233	9.77	91.02
9	*	9	242	3.52	94.53
12	*	6	248	2.34	96.88
15	*	4	252	1.56	98.44
18		0	252	0.00	98.44
21		1	253	0.39	98.83
24		1	254	0.39	99.22
27		0	254	0.00	99.22
30		0	254	0.00	99.22
33		0	254	0.00	99.22
36		0	254	0.00	99.22
39		0	254	0.00	99.22
42		0	254	0.00	99.22
45		0	254	0.00	99.22
48		0	254	0.00	99.22
51		0	254	0.00	99.22
54		0	254	0.00	99.22
57		0	254	0.00	99.22
60		2	256	0.78	100.00

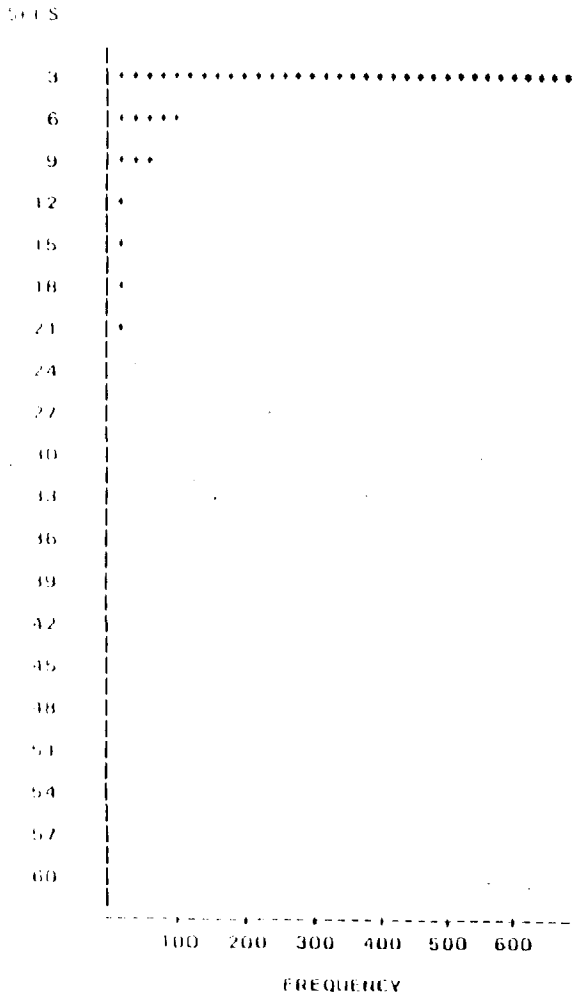
30 60 90 120 150 180 210

FREQUENCY

SPES REPORTING SALES OF SPANISH MACKEREL
BY THE NUMBER OF SALES (TRIPS) DURING
THE SFY 1989 - 1990 FOR EACH REGION

AREA:SOUTHWEST COAST

FREQUENCY BAR CHART



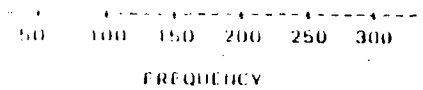
MIDPOINT SPES	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
3	688	688	72.80	72.80
6	105	793	11.11	83.92
9	63	856	6.67	90.58
12	29	885	3.07	93.65
15	12	897	1.27	94.92
18	12	909	1.27	96.19
21	10	919	1.06	97.25
24	2	921	0.21	97.46
27	9	930	0.95	98.41
30	4	934	0.42	98.84
33	3	937	0.32	99.15
36	3	940	0.32	99.47
39	0	940	0.00	99.47
42	0	940	0.00	99.47
45	3	943	0.32	99.79
48	1	944	0.11	99.89
51	1	945	0.11	100.00
54	0	945	0.00	100.00
57	0	945	0.00	100.00
60	0	945	0.00	100.00

SPLS REPORTING SALES OF SPANISH MACKEREL
BY THE NUMBER OF SALES (TRIPS) DURING
THE SFY 1989 - 1990 FOR EACH REGION

AREA-EAST COAST

FREQUENCY BAR CHART

MIDPOINT TRIPS	FREQ	CUM. FREQ	PERCENT	CUM. PERCENT
3	330	330	64.33	64.33
6	52	382	10.14	74.46
9	36	418	7.02	81.48
12	21	439	4.09	85.58
15	18	457	3.51	89.08
18	16	473	3.12	92.20
21	8	481	1.56	93.76
24	9	490	1.75	95.52
27	5	495	0.97	96.49
30	5	500	0.97	97.47
33	1	501	0.19	97.66
36	4	505	0.78	98.44
39	2	507	0.39	98.83
42	1	508	0.19	99.03
45	1	509	0.19	99.22
48	1	510	0.19	99.42
51	1	511	0.19	99.61
54	0	511	0.00	99.61
57	1	512	0.19	99.81
60	1	513	0.19	100.00



CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

TABLE OF CRAFT_AGE BY CRAFT_LOA

(CRAFT_AGE) (CRAFT_LOA)

Frequency Percent Row Pct Col Pct	0 - 25	26 - 35	36 - 45	46 - 55	56 - 65	GT 65	Total
LE 3 YRS	49 10.65 66.22 20.16	21 4.57 28.38 14.29	3 0.65 4.05 6.25	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.22 1.35 20.00	74 16.09
GT 3 - 7 YRS	54 11.74 51.92 22.22	36 7.83 34.62 24.49	12 2.61 11.54 25.00	2 0.43 1.92 14.29	0 0.00 0.00 0.00	0 0.00 0.00 0.00	104 22.61
8 - 10 YRS	38 8.26 51.35 15.64	28 6.09 37.84 19.05	6 1.30 8.11 12.50	1 0.22 1.35 7.14	1 0.22 1.35 33.33	0 0.00 0.00 0.00	74 16.09
11 - 15 YRS	52 11.30 51.49 21.40	26 5.65 25.74 17.69	14 3.04 13.86 29.17	4 0.87 3.96 28.57	2 0.43 1.98 66.67	3 0.65 2.97 60.00	101 21.96
16 - 20 YRS	29 6.30 47.54 11.93	24 5.22 39.34 16.33	5 1.09 8.20 10.42	2 0.43 3.28 14.29	0 0.00 0.00 0.00	1 0.22 1.64 20.00	61 13.26
21 - 25 YRS	14 3.04 53.85 5.76	3 0.65 11.54 2.04	6 1.30 23.08 12.50	3 0.65 11.54 21.43	0 0.00 0.00 0.00	0 0.00 0.00 0.00	26 5.65
GT 25 YRS	7 1.52 35.00 2.88	9 1.96 45.00 6.12	2 0.43 10.00 4.17	2 0.43 10.00 14.29	0 0.00 0.00 0.00	0 0.00 0.00 0.00	20 4.35
Total	243 52.83	147 31.96	48 10.43	14 3.04	3 0.65	5 1.09	460 100.00

CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

TABLE OF CRAFT_AGE BY CRAFT_HP

(CRAFT_AGE) (CRAFT_HP)

Frequency Percent Row Pct Col Pct	0 - 25	26 - 50	51 - 75	76 - 100	101 - 125	126 - 150	Total
LE 3 YRS	15 3.26 20.27 37.50	6 1.30 8.11 37.50	2 0.43 2.70 11.76	7 1.52 9.46 25.93	0 0.00 0.00 0.00	7 1.52 9.46 14.00	74 16.09
GT 3 - 7 YRS	8 1.74 7.69 20.00	4 0.87 3.85 25.00	8 1.74 7.69 47.06	7 1.52 6.73 25.93	2 0.43 1.92 11.11	9 1.96 8.65 18.00	104 22.61
8 - 10 YRS	2 0.43 2.70 5.00	3 0.65 4.05 18.75	2 0.43 2.70 11.76	2 0.43 2.70 7.41	4 0.87 5.41 22.22	8 1.74 10.81 16.00	74 16.09
11 - 15 YRS	8 1.74 7.92 20.00	1 0.22 0.99 6.25	1 0.22 0.99 5.88	6 1.30 5.94 22.22	7 1.52 6.93 38.89	13 2.83 12.87 26.00	101 21.96
16 - 20 YRS	4 0.87 6.56 10.00	2 0.43 3.28 12.50	2 0.43 3.28 11.76	2 0.43 3.28 7.41	2 0.43 3.28 11.11	5 1.09 8.20 10.00	61 13.26
21 - 25 YRS	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.22 3.85 5.88	1 0.22 3.85 3.70	3 0.65 11.54 16.67	5 1.09 19.23 10.00	26 5.65
GT 25 YRS	3 0.65 15.00 7.50	0 0.00 0.00 0.00	1 0.22 5.00 5.88	2 0.43 10.00 7.41	0 0.00 0.00 0.00	3 0.65 15.00 6.00	20 4.35
Total	40 8.70	16 3.48	17 3.70	27 5.87	18 3.91	50 10.87	460 100.00

(Continued)

CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

TABLE OF CRAFT_AGE BY CRAFT_HP

(CRAFT_AGE) (CRAFT_HP)

Frequency Percent Row Pct Col Pct	151 - 175	176 - 200	201 - 225	226 - 250	251 - 275	276 - 300	Total
LE 3 YRS	4 0.87 5.41 22.22	8 1.74 10.81 11.11	7 1.52 9.46 13.46	8 1.74 10.81 22.22	5 1.09 6.76 33.33	3 0.65 4.05 17.65	74 16.09
GT 3 - 7 YRS	5 1.09 4.81 27.78	19 4.13 18.27 26.39	11 2.39 10.58 21.15	11 2.39 10.58 30.56	1 0.22 0.96 6.67	2 0.43 1.92 11.76	104 22.61
8 - 10 YRS	4 0.87 5.41 22.22	15 3.26 20.27 20.83	5 1.09 6.76 9.62	3 0.65 4.05 8.33	5 1.09 6.76 33.33	4 0.87 5.41 23.53	74 16.09
11 - 15 YRS	1 0.22 0.99 5.56	16 3.48 15.84 22.22	14 3.04 13.86 26.92	9 1.96 8.91 25.00	2 0.43 1.98 13.33	4 0.87 3.96 23.53	101 21.96
16 - 20 YRS	3 0.65 4.92 16.67	6 1.30 9.84 8.33	12 2.61 19.67 23.08	3 0.65 4.92 8.33	0 0.00 0.00 0.00	3 0.65 4.92 17.65	61 13.26
21 - 25 YRS	0 0.00 0.00 0.00	4 0.87 15.38 5.56	1 0.22 3.85 1.92	1 0.22 3.85 2.78	2 0.43 7.69 13.33	0 0.00 0.00 0.00	26 5.65
GT 25 YRS	1 0.22 5.00 5.56	4 0.87 20.00 5.56	2 0.43 10.00 3.85	1 0.22 5.00 2.78	0 0.00 0.00 0.00	1 0.22 5.00 5.88	20 4.35
Total	18 3.91	72 15.65	52 11.30	36 7.83	15 3.26	17 3.70	460 100.00

(Continued)

CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

TABLE OF CRAFT_AGE BY CRAFT_HP

(CRAFT_AGE) (CRAFT_HP)

Frequency Percent Row Pct Col Pct	301 - 325	326 - 350	351 - 375	376 - 400	401+	Total
LE 3 YRS	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.22 1.35 12.50	1 0.22 1.35 2.94	74 16.09
GT 3 - 7 YRS	2 0.43 1.92 14.29	4 0.87 3.85 20.00	2 0.43 1.92 33.33	2 0.43 1.92 25.00	7 1.52 6.73 20.59	104 22.61
8 - 10 YRS	3 0.65 4.05 21.43	4 0.87 5.41 20.00	2 0.43 2.70 33.33	2 0.43 2.70 25.00	6 1.30 8.11 17.65	74 16.09
11 - 15 YRS	5 1.09 4.95 35.71	3 0.65 2.97 15.00	2 0.43 1.98 33.33	1 0.22 0.99 12.50	8 1.74 7.92 23.53	101 21.96
16 - 20 YRS	3 0.65 4.92 21.43	9 1.96 14.75 45.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 1.09 8.20 14.71	61 13.26
21 - 25 YRS	1 0.22 3.85 7.14	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.22 3.85 12.50	6 1.30 23.08 17.65	26 5.65
GT 25 YRS	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 0.22 5.00 12.50	1 0.22 5.00 2.94	20 4.35
Total	14 3.04	20 4.35	6 1.30	8 1.74	34 7.39	460 100.00

CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

HOMEPORT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
ALLIGATOR POINT	1	0.2	1	0.2
APALACHICOLA	2	0.4	3	0.7
ATLANTIC BEACH	1	0.2	4	0.9
BAY POINT	1	0.2	5	1.1
BIG PINE	1	0.2	6	1.3
BIG PINE KEY	20	4.5	26	5.8
BLACK POINT	1	0.2	27	6.0
BOKEELIA	10	2.2	37	8.3
BONITA SPRINGS	2	0.4	39	8.7
BOYNTON	1	0.2	40	8.9
BOYNTON BEACH	6	1.3	46	10.3
BRADENTON	1	0.2	47	10.5
CANAVERAL	1	0.2	48	10.7
CAPE CANAVERAL	3	0.7	51	11.4
CAPE CORAL	1	0.2	52	11.6
CARRABELLE	4	0.9	56	12.5
CEDAR KEY	5	1.1	61	13.6
COCOA BEACH	2	0.4	63	14.1
CORTEZ	5	1.1	68	15.2
CRYSTAL RIVER	2	0.4	70	15.7
CUDJOE KEY	6	1.3	76	17.0
DAYTONA	1	0.2	77	17.2
DAYTONA BEACH	9	2.0	86	19.2
DELRAY BEACH	1	0.2	87	19.5
DESTIN	2	0.4	89	19.9
DUNEDIN	1	0.2	90	20.1
EASTPOINT	1	0.2	91	20.4
ENGLEWOOD	1	0.2	92	20.6
EVERGLADES	1	0.2	93	20.8
FERNANDINA BEACH	2	0.4	95	21.3
FROGMORE, SOUTH	1	0.2	96	21.5
FT. LAUDERDALE	5	1.1	101	22.6
FT. MYERS	1	0.2	102	22.8
FT. MYERS BEACH	2	0.4	104	23.3
FT. PIERCE	3	0.7	107	23.9
FT. WALTON BEACH	2	0.4	109	24.4
GOODLAND	2	0.4	111	24.8
GRANT	5	1.1	116	26.0
GULFBREEZE	2	0.4	118	26.4
GULFPORT	1	0.2	119	26.6
HAULOVER BEACH	1	0.2	120	26.8
HIALEAH	1	0.2	121	27.1
HIGHLAND BEACH	1	0.2	122	27.3
HOLLY HILL	1	0.2	123	27.5
HOLLYWOOD	2	0.4	125	28.0
HOMESTEAD	2	0.4	127	28.4
HOMOSASSA	1	0.2	128	28.6
HORSESHOE BEACH	4	0.9	132	29.5
INGLIS	1	0.2	133	29.8
ISLAMORADA	9	2.0	142	31.8

CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

HOMEPORT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
JACKSONVILLE	8	1.8	150	33.6
JENSEN BEACH	1	0.2	151	33.8
JUPITER	20	4.5	171	38.3
KEY COLONY BEACH	2	0.4	173	38.7
KEY LARGO	5	1.1	178	39.8
KEY WEST	35	7.8	213	47.7
LAKE PARK	2	0.4	215	48.1
LAKE WORTH	2	0.4	217	48.5
LANTANA	3	0.7	220	49.2
LITTLE TORCH KEY	2	0.4	222	49.7
LONG KEY	1	0.2	223	49.9
LOWER MATECUMBE	1	0.2	224	50.1
LOXAHATCHEE	1	0.2	225	50.3
LYNN HAVEN	1	0.2	226	50.6
MADIERA BEACH	1	0.2	227	50.8
MARATHON	28	6.3	255	57.0
MARCO	1	0.2	256	57.3
MAYPORT	10	2.2	266	59.5
MELBOURNE	3	0.7	269	60.2
MERRITT ISLAND	2	0.4	271	60.6
MEXICO BEACH	2	0.4	273	61.1
MIAMI	17	3.8	290	64.9
MILTON	1	0.2	291	65.1
NAPLES	11	2.5	302	67.6
NEPTUNE BEACH	2	0.4	304	68.0
NEW SMYRNA BEACH	3	0.7	307	68.7
NORTH MIAMI	1	0.2	308	68.9
OAK HILL	1	0.2	309	69.1
OCEAN RIDGE	2	0.4	311	69.6
PALM BAY	1	0.2	312	69.8
PALM BEACH	8	1.8	320	71.6
PALM BEACH GARDE	2	0.4	322	72.0
PALMETTO	1	0.2	323	72.3
PANAMA	1	0.2	324	72.5
PANAMA CITY	14	3.1	338	75.6
PANAMA CITY BEAC	1	0.2	339	75.8
PARKER	1	0.2	340	76.1
PENSACOLA	6	1.3	346	77.4
PINE ISLAND	1	0.2	347	77.6
PLACIDA	1	0.2	348	77.9
PLANT CITY	1	0.2	349	78.1
POMPANO BEACH	1	0.2	350	78.3
PONCE INLET	5	1.1	355	79.4
PORT CANAVERAL	9	2.0	364	81.4
PORT JEFFERSON	1	0.2	365	81.7
PORT OF PALM BEA	1	0.2	366	81.9
PORT SALERNO	3	0.7	369	82.6
PORT SLAERNO	1	0.2	370	82.8
RIVIERA BEACH	13	2.9	383	85.7
ROCKLEDGE	1	0.2	384	85.9

CZM-FUNDED COASTAL PELAGIC COST AND REVENUE SURVEY
HARVESTING CRAFT CHARACTERIZATION VARIABLES

HOMEPORT	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SEBASTIAN	24	5.4	408	91.3
SOUTHPORT	1	0.2	409	91.5
ST. AUGUSTINE	3	0.7	412	92.2
ST. JAMES	2	0.4	414	92.6
ST. LUCIE INLET	1	0.2	415	92.8
ST. MARKS	1	0.2	416	93.1
ST. PETERSBURG	2	0.4	418	93.5
STEINHATCHEE	7	1.6	425	95.1
STUART	2	0.4	427	95.5
SUGARLOAF KEYS	1	0.2	428	95.7
SUMMERLAND KEY	2	0.4	430	96.2
SUWANEE	1	0.2	431	96.4
TAMPA	1	0.2	432	96.6
TAVERNIER	2	0.4	434	97.1
TEQUESTA	1	0.2	435	97.3
TIERRA VERDE	1	0.2	436	97.5
TITUSVILLE	1	0.2	437	97.8
VERO BEACH	2	0.4	439	98.2
WEST PALM BEACH	6	1.3	445	99.6
WILLISTON	1	0.2	446	99.8
YANKEETOWN	1	0.2	447	100.0

OBS	SEAFOOD DEALER SURVEY NUMBER (DEALERID)	RELATIONSHIP WITH FISHERMEN (A15)	LACK OF SUBSTITUTES (B15)	RELATIVE PRICE (C15)	MARK-UP MARGIN (D15)	RELIABLE SUPPLY (E15)	EXISTING CAPITAL INVESTMENT (F15)	TIE-IN SALES (G15)	SEASONAL AVAILABILITY (H15)	DEMAND EXCEEDS SUPPLY (I15)	UNIMPORTANT PRODUCT (J15)	OPEN-ENDED OTHER CATEGORY (OTH_15)	OTHER CATEGORY (K15)
1	0												
2	2	5	3	4	2	3	1	1	1	1	2		
3	4	5	1	1	1	1	1	2	4	1	1		
4	5	1	5	5	2	3	1	1	5	4	5		
5	6	1	5	3	3	5	5	2	5	4	2		
6	16	5	1	4	4	1	1	1	5	4	1		
7	20	3	3	3	3	3	3	3	4	3	3		
8	22	5	5	4	3	5	5	3	3	4	4		
9	31	2	5	3	3	3	2	3	3	5			
10	41	3	1	5	4	1	1	1	4	4	1		
11	42	5	5	5	5	5	5	5	5	5	1	UNIDENTIFIED	1
12	44	4	5	3	5	3	1	5	3	4	2		
13	57	1	1	2	5	2	1	1	5	2	4		
14	63	2	4	4	4	3	2	3	4	1	2	BAIT NEEDS	5
15	65	5	1	3	5	5	1	3	5	5	5		
16	69	5	2	4	5	5	2	1	5	5			
17	72	4	2	2	1	4	1	3	5	1	4		
18	76	4	4	3	1	3	1	4	4	3	2		
19	86	1	1	1	1	1	1	1		1	1		
20	90	5	2	3	3	2	4	5	3	3			
21	92	5	4	4	5	5	2	2	5	5			
22	96	3	1	1	5		1	5	5	5	5		
23	100	3		4	3				4	3			
24	111	5	1	5	5	5	5	5	5	5	5		
25	113	3	1	4	4	3	2	1	1	3	3		
26	117	2	2	2	3	3	3	3	3	3	3		
27	118	4	1	4	4	1	1	2	5	5	1		
28	128	3	1	2	2	4	1	2	4	3	3		
29	130	2	2	2	2	2	2	2	2	2	2		
30	133	5	5			5							
31	134	5		4	4	4	4		3				
32	136	1	3	4	2	3	1	3	4	4			
33	137	3	1	2	2	2	2	4	2	2	3		
34	150	2	1	1	1	1	1	1	1	1	1		
35	153	5	5	5	5	5	1	1	5	3	2	QUALITY BAIT	5
36	155	1	1	1	1	1	1	1	1	1	1		
37	163	5	5	3	5	5	2	4	5	2	5		

OBS	DEALERID	A15	B15	C15	D15	E15	F15	G15	H15	I15	J15	OTH_15	K15
38	164	5	1	1	5	5	5	5	5	1		SEASONAL	5
39	174	1	1	4	4	1	1	1	1	1	1		
40	175								1				
41	177		4									ETHNIC GROUPS	5
42	180	5	1	4	4	4	1				1		
43	182	2	3	4	3	3	1	3	5	5	2		
44	197	3	1	1	1	2	2	4	1	1	1		
45	198	5	1	1	1	1	1	1	1	1	1		
46	199	4	4	4	4	4		4	4	4	1		
47	200	5	1	5	5	5	5	5	3	3	3		
48	203	1	1	3	3	1	1	1	1	1	1		
49	207	5	2	3	3	3	2	2	2	2	2		
50	210	5	5	4	3	4	4	4	4	4	3		
51	212	3	1	1	1	1	1	1	1	1	1		
52	214								5				
53	216	1	1	4	4	4	1	1	4	4	1	LATINS	5
54	217	3	1	2	3	1	1	2	1	1	1		
55	222	3	5	4	4	4	4	4	3	4	3		
56	246	4	1	4	1	2	1	2	2	4	2		
57	265		5		2	5	5			5			
58	274	5	5	5	5	5	5	5	5	5			
59	285	1	1	3	2		1	3	4	1	3		
60	289	5	5	5	3	5							
61	292	5	1	1	1	1	1	1	3	1	3		

FIRST RECEIVER SURVEY QUESTION: FRESH MACKEREL SUPPLY

BY MONTH AND THE QUANTITY DEMANDED

TABLE OF K_MONTH1 BY K_POUND1

K_MONTH1 K_POUND1

Frequency Percent Row Pct Col Pct	0 - 10	41 - 50	91 - 100	191 - 200	291 - 300	Total
NRG	46 54.12 97.87 80.70	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	47 55.29
JAN	3 3.53 33.33 5.26	1 1.18 11.11 100.00	0 0.00 0.00 0.00	2 2.35 22.22 100.00	0 0.00 0.00 0.00	9 10.59
FEB	3 3.53 33.33 5.26	0 0.00 0.00 0.00	2 2.35 22.22 66.67	0 0.00 0.00 0.00	0 0.00 0.00 0.00	9 10.59
MAR	2 2.35 40.00 3.51	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	5 5.88
APR	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 3.53
Total	57 67.06	1 1.18	3 3.53	2 2.35	1 1.18	85 100.00

(Continued)

FIRST RECEIVER SURVEY QUESTION: FRESH MACKEREL SUPPLY

BY MONTH AND THE QUANTITY DEMANDED

TABLE OF K_MONTH1 BY K_POUND1

K_MONTH1 K_POUND1

Frequency Percent Row Pct Col Pct	0 - 10	41 - 50	91 - 100	191 - 200	291 - 300	Total
MAY	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18 50.00 100.00	2 2.35
JUN	1 1.18 50.00 1.75	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 2.35
JUL	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18 100.00 33.33	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18
OCT	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18
DEC	2 2.35 33.33 3.51	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	6 7.06
Total	57 67.06	1 1.18	3 3.53	2 2.35	1 1.18	85 100.00

(Continued)

FIRST RECEIVER SURVEY QUESTION: FRESH MACKEREL SUPPLY

BY MONTH AND THE QUANTITY DEMANDED

TABLE OF K_MONTH1 BY K_POUND1

K_MONTH1 K_POUND1

Frequency Percent Row Pct Col Pct	491 - 500	751 - 1,000	1,001 - 10,000	10,001 - 100,000	Total
NRG	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18 2.13 11.11	0 0.00 0.00 0.00	47 55.29
JAN	0 0.00 0.00 0.00	1 1.18 11.11 50.00	2 2.35 22.22 22.22	0 0.00 0.00 0.00	9 10.59
FEB	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 2.35 22.22 22.22	2 2.35 22.22 28.57	9 10.59
MAR	1 1.18 20.00 33.33	0 0.00 0.00 0.00	1 1.18 20.00 11.11	1 1.18 20.00 14.29	5 5.88
APR	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18 33.33 11.11	2 2.35 66.67 28.57	3 3.53
Total	3 3.53	2 2.35	9 10.59	7 8.24	85 100.00

(Continued)

FIRST RECEIVER SURVEY QUESTION: FRESH MACKEREL SUPPLY

BY MONTH AND THE QUANTITY DEMANDED

TABLE OF K_MONTH1 BY K_POUND1

K_MONTH1 K_POUND1

Frequency Percent Row Pct Col Pct	491 - 500	751 - 1,000	1,001 - 10,000	10,001 - 100,000	Total
MAY	1 1.18 50.00 33.33	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 2.35
JUN	1 1.18 50.00 33.33	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 2.35
JUL	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18
OCT	0 0.00 0.00 0.00	1 1.18 100.00 50.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 1.18
DEC	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 2.35 33.33 22.22	2 2.35 33.33 28.57	6 7.06
Total	3 3.53	2 2.35	9 10.59	7 8.24	85 100.00

The Marine Fisheries Commission is considering changes to the Spanish and king mackerel rules in order to create the maximum sustai
resource. Records indicate you catch king or Spanish mackerel. To help ensure that your interests are considered please complete and re

1. If you hold more then one SPL you will receive several questionnaires. Please only complete one survey for each fishing craft you use. What is the state or Coast Guard number for this boat/vessel:

_____.

2. How many craft do you use to fish for king or Spanish mackerel:

_____(total number of craft)

3. Please list the fish species from which you earn at least 20% of your gross income from fishing(check all that apply)

a.____Spanish, b.____king, c.____pompano, d.____grouper, e.____amberjack,

f.____mullet, g.____seatrout, h.____sheepshead,_____other(name)

4. Are you the owner_____, captain_____ both_____.(check one)

5. How long have you owned_____captained_____(yrs/mos)

6. Please describe your craft:

a. how old is the craft:_____(years) b. what is the length(LOA)_____(ft)

c. the displacement_____(tons)

d. the hold capacity_____(lbs)

e. the powerplant _____manuf._____HP

f. what is the homeport_____(city)

7. How many trips did you take,_____(1989)_____(1990).

8. Did you land your catch in other then your homeport during:

_____(1989)_____(1990)_____(1991) (yes or no)

9. If yes were those ports:_____out of state_____SE_FL _____SW_FL

____E_Cen_FL____W_Cen_FL____NE_FL____Big Bend____Panhandle(check all that apply)

10. Do you target king or Spanish mackerels or do you consider them to be an incidental bycatch (less then 15%)? Please circle correct answer.

kings	target	bycatch
Spanish	target	bycatch

11. Please rank your recent fishing experience for mackerel on a scale of one to ten (one= very bad, 10=excellent):

	1989	1990	1991
Spanish	_____	_____	_____
kings	_____	_____	_____

12. Please describe the gears you use to target mackerel:

	amount of gear	trip length	crew size(excluding capt.)
hook and line	_____		
gillnet	_____		
trammel net	_____		
Other(describe)	_____		

13. Please provide an estimate of your costs for t

a. insurance$_____%___

b. license fees$_____%___

c. business expense$_____

d. loan payment$_____%___

e. other costs $_____

$_____%___

f. unloading costs/per lb$_____

g. fuel/oil costs$_____%___

h. ice costs$_____%___

i. bait costs$_____%___

j. vessel repair$_____%___

k. gear repair$_____%___

l. grocery $_____

m. crew shares $_____

n. total $_____

14. What was the most common number of crew employed during 1989/90?_____

15. Have you targeted new species, other the during quota closures. P

a._____b._____

c._____d._____

16. Did targeting these new species require the

_____(yes/no) DESCRIBE_____

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2540 EXECUTIVE CENTER CIRCLE WEST
SUITE 106
TALLAHASSEE, FLORIDA 32301

17. What time of the year (month) did you receive the best price per pound:

	1989	1990	1991
month & $/lb.			
for kings			
for Spanish			

18. Why do you think you got that price (check all that apply):____do not know,____good quality,_____limited supply,_____large demand , _____relationship with dealer, _____other, please describe_____

_____.

19. If you answered good quality for number 18 please describe what the circumstances were that provided better quality during that time of year:

CHARTERBOATS AND HEADBOATS ONLY:

20. Is the vessel a____headboat or ____charterboat(check one only)

21. Did you begin catch and release fishing for king and Spanish mackerel after quotas/bag limits went into effect?_____(yes or no)

22. Did the regulation of king and Spanish mackerel fisheries cause you to lose charters:

1989/90	yes/no	number lost/ % lost
king	_____	_____
Spanish	_____	_____

23. What is your charter rate?

	half day	full day
in season:		
off season:		

WHOLESALE/RETAIL DEALERS QUESTIONNAIRE The FMFC wants to update information about the state's mackerel resources to improve the management of the fishery. Please complete and return this form so your views will be considered.

1. What percentage of your sales come from Florida seafood ?_____%

2. Do mackerels account for a significant portion of your sales:
king yes___ no___, Spanish yes___ no___, cero yes___ no___.

3. If you could obtain fresh mackerels during periods when supplies are limited, which months would you choose and what quantities could you sell:

king 1._____,(month,lbs) 2._____,(month,lbs)

Spanish 1._____,(month,lbs) 2._____,(month,lbs)

4. What other species do you try to obtain when you cannot buy mackerel:

a. substitutes for king:_____ b.substitutes

for Spanish_____(name or species code #)

4b.Are these from out of state_____ or from Florida?_____(yes,no,%)

4c. Can you substitute large Spanish for kings ?_____(yes or no)

5. What price range did you pay per pound during 1989/90 ?
high $/lb low $/lb.

king mackerel(price/lb and month) _____

Spanish (price/lb and month) _____

6. What percentage of the mackerel is caught by net or hook and line ?

	king mackerel	Spanish mackerel
hook and line	_____%	_____%
gill net	_____%	_____%

7. Do you pay more for hook and line caught mackerel ?

	king mackerel	Spanish mackerel
cents/lb difference	_____	_____ (enter 0 if no difference)

8. What percentage of your catch is from boats versus vessels:

	king mackerel	Spanish mackerel
boats(less than 30 feet)	_____%	_____%
vessels(30+ feet in length)	_____%	_____%
charter/party boats	_____%	_____%

9. Please estimate the percentage of your sales to:

	king mackerel	Spanish mackerel
secondary wholesalers	_____%	_____%
processors	_____%	_____%
fish markets	_____%	_____%
other _____	_____%	_____%

10. Please estimate the percentage of your geographical sales to:

	king mackerel	Spanish mackerel
southeast Florida	_____%	_____%
Tampa Bay area	_____%	_____%
other Florida	_____%	_____%
New York	_____%	_____%
other U.S	_____%	_____%
Caribbean	_____%	_____%
other export	_____%	_____%

11. Please estimate the percentage of your mackerel which are sold in each of the following product forms:

	king mackerel	Spanish mackerel
round fresh	_____%	_____%
round frozen	_____%	_____%
fillet frozen	_____%	_____%
steaked	_____%	_____%

12. Are you able to receive a premium markup margin for a particular product form ? Please identify the product form and the percentage of the premium.
king mackerel Spanish mackerel

13. If you identified a premium product form, what is the maximum monthly supply you could handle on a sustained basis(permanently)?

king mackerel _____lbs.

Spanish mackerel _____lbs.

14. We would like to interview some of your wholesale/processor customers to further investigate market demands. Please provide the mailing addresses of some customers.

NAMES AND ADDRESSES:

15. How important were the following attributes in your decision to purchase Spanish mackerel. ***please circle the number corresponding to the level of importance for each attribute listed below:***

	not important			very important	
a. relationship with fishermen	1	2	3	4	5
b. lack of substitutes	1	2	3	4	5
c. relative price	1	2	3	4	5
d. mark up margin	1	2	3	4	5
e. reliable supply	1	2	3	4	5
f. existing capital investment	1	2	3	4	5
g. tie-in sales	1	2	3	4	5
h. seasonal availability	1	2	3	4	5
i. demand exceeds supply	1	2	3	4	5
j. unimportant product	1	2	3	4	5
k. other _____	1	2	3	4	5

John D. Adeimy
531 NORTH DIXIE HIGHWAY
LAKE WORTH, FL 33460

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SUITE 106
TALLAHASSEE, FLORIDA 32301

This file describes the DBase III files that contain the responses to the commercial fishing surveys sent to harvesters and dealers who reported fishing for coastal pelagics during the 1989/90 fishing year. The accompanying disk contains a copy of this file and the following DBase III files:

1. Mackfish.dbf - this contains 'label' data. Specifically, this file contains all names and addresses of fishermen that received the survey.

2. Mackfish.ndx - this is the matching index file.

3. Mackdeal.dbf - this file also contains 'label' data. This contains all names and addresses of dealers and wholesalers that received the survey. This also contains the 'snowball dealer' names and addresses.

4. Mackdeal.ndx - this is the matching index file.

5. Fisherma.dbf - this is part one of the main database, and consists of all data edited from the surveys received from fishermen. This file contains all questions on the survey up to and including question #15.

6. Fisherma.ndx - this is the matching index file.

7. Fisher2.dbf - this is part two of the main database, and consists of the remaining data concerning surveys sent in by fishermen, and starts at question #16.

8. Fisher2.ndx - this is the matching index file.

9. Dealer.dbf - this is part one of the second database, and consists of all data edited from the surveys received from wholesalers, dealers, and 'snowball dealers'. This file contains all questions on the dealer survey up to and including question #14.

10. Dealer.ndx - this is the matching index file.

11. Dealer2.dbf - this is part two of the second database, and consists of all remaining data concerning surveys sent in by dealers, wholesalers, etc., and starts at question #15.

12. Dealer2.ndx - this is the matching index file.

13. Tempfish.dbf - this is a duplicate file that matches Mackfish.dbf, consisting of addresses and names concerning fishermen, and also containing the 'fisherid' numbers, which identify each individual record. Note that access to these records depends on the fisherid number, and not the record number.

14. Tempfish.ndx - this is the matching index file.

15. Tempdeal.dbf - this is a duplicate file that matches Mackdeal.dbf, consisting of addresses and names concerning dealers, wholesalers, and 'snowball dealers', and also containing the 'dealerid' numbers, which identify each individual record. Note that access to these records depends on the dealerid number, and not the record number.

16. Tempdeal.ndx - this is the matching index file.

17. Marine.exe - this is one of the software programs.

list struc
ucture for database: D:fisherma.dbf
Number of data records: 4
Date of last update : 10/11/91

Field	Field Name	Type	Width	Dec	
1	FISHERID	Numeric	5		
2	COASTGUARD	Character	10		#1
3	CRAFT_NO	Numeric	2		# 2
4	A3	Character	3		# 3
5	B3	Character	3		
6	C3	Character	3		
7	D3	Character	3		
8	E3	Character	3		
9	F3	Character	3		
10	G3	Character	3		
11	H3	Character	3		
12	I3	Character	3		
13	J3	Character	3		
14	K3	Character	3		
15	L3	Character	3		
16	OWN_CAPT	Character	1		#4
17	OWN_YR	Numeric	2		#5
18	OWN_MO	Numeric	2		
19	CAPT_YR	Numeric	2		
20	CAPT_MO	Numeric	2		
21	CRAFT_AGE	Numeric	~~2~~4	2	#6
22	CRAFTLENGT	Numeric	~~3~~4	2	
23	CRAFTDISP	Numeric	~~4~~5	2	
24	CRAFTHOLD	Numeric	6		
25	CRAFTPOWER	Character	25		
26	CRAFTHP	Numeric	~~3~~4		
27	CRAFTHOME	Character	25		
28	TRIPS1989	Numeric	3		#7
29	TRIPS1990	Numeric	3		
30	LAND1989	Character	1		
31	LAND1990	Character	1		#8
32	LAND1991	Character	1		
33	PORTSOUT	Character	1		#9
34	PORTSSEFL	Character	1		
35	PORTSSWFL	Character	1		
36	PORTSEC	Character	1		
37	PORTSWC	Character	1		
38	PORTSNEFL	Character	1		
39	PORTSBIG	Character	1		
40	PORTSPAN	Character	1		
41	KINGTARGET	Character	1		#10
42	KINGBYCATC	Character	1		
43	SPANTARGET	Character	1		
44	SPANBYCATC	Character	1		
45	SPAN89	Character	2		
46	SPAN90	Character	2		#11
47	SPAN91	Character	2		
48	KING89	Character	2		
49	KING90	Character	2		
50	KING91	Character	2		
51	HL_GEAR_1	Numeric	2		#12
52	HL_GEAR_2	Numeric	2		
53	HL_GEAR_3	Numeric	2		
54	HL_GEARN1	Character	3		

55	HL_GEARN2	Character	3		
56	HL_GEARN3	Character	3		
57	HL_TRIP	Numeric	4		
58	HL_CREW	Numeric	2		
59	GL_GEAR	Numeric	2		
60	GL_MESH	Numeric	3	1	
61	GL_DEPTH	Numeric	4~~8~~		
62	GL_LENGTH	Numeric	5~~2~~4		
63	GL_TRIP	Numeric	~~4~~6		
64	GL_CREW	Numeric	2		
65	TR_GEAR	Numeric	2		
66	TR_MESH	Numeric	3	1	
67	TR_DEPTH	Numeric	4~~8~~		
68	TR_LENGTH	Numeric	5~~8~~		
69	TR_TRIP	Numeric	4		
70	TR_CREW	Numeric	2		
71	OT_NAME	Character	25		
72	OT_GEAR_1	Numeric	2		
73	OT_GEAR_2	Numeric	2		
74	OT_GEAR_3	Numeric	2		
75	OT_GEARN1	Character	3		
76	OT_GEARN2	Character	3		
77	OT_GEARN3	Character	3		
78	OT_TRIP	Numeric	4		
79	OT_CREW	Numeric	2		
80	A13DOLLAR	Numeric	~~8~~10	2	
81	A13PERC	Numeric	4	2	#13
82	B13DOLLAR	Numeric	~~8~~10	2	
83	B13PERC	Numeric	4	2	
84	B13LICENSE	Numeric	2		
85	C13DOLLAR	Numeric	~~8~~10	2	
86	C13PERC	Numeric	4	2	
87	D13DOLLAR	Numeric	~~8~~10	2	
88	D13PERC	Numeric	4	2	
89	D13RATE	Numeric	8	2	
90	E13DOLL1	Numeric	~~8~~10	2	
91	E13PERC1	Numeric	4	2	
92	E13NAME1	Character	20		
93	E13DOLL2	Numeric	~~8~~10	2	
94	E13PERC2	Numeric	4	2	
95	E13NAME2	Character	20		
96	F13DOLL	Numeric	~~8~~10	2	
97	F13PERC	Numeric	4	2	
98	G13DOLL	Numeric	~~8~~10	2	
99	G13PERC	Numeric	4	2	
100	G13GALLONS	Numeric	6		
101	H13DOLL	Numeric	~~8~~10	2	
102	H13PERC	Numeric	4	2	
103	H13POUNDS	Numeric	6		
104	I13DOLL	Numeric	~~8~~10	2	
105	I13PERC	Numeric	4	2	
106	I13POUNDS	Numeric	6		
107	J13DOLL	Numeric	~~8~~10	2	
108	J13PERC	Numeric	4	2	
109	J13HAULOUT	Character	1		
110	K13DOLL	Numeric	~~8~~10	2	
111	K13PERC	Numeric	4	2	
112	K13REPLACE	Character	1		
113	L13DOLL	Numeric	~~8~~10	2	
114	L13PERC	Numeric	4	2	
115	M13DOLL	Numeric	~~8~~10	2	
116	M13PERC	Numeric	4	2	
117	N13DOLL	Numeric	~~8~~10	2	
118	N13PERC	Numeric	4	2	

119	CREWNUM	Numeric	2		#14
120	A15	Character	3		
121	B15	Character	3		#15
122	C15	Character	3		
123	D15	Character	3		
124	E15	Character	3		
** Total **			547		

. set print off
. eject

Date of last update : 10/11/91

Field	Field Name	Type	Width	Dec	
1	FISHERID	Numeric	5		
2	DONTKNOW	Character	1		#18
3	GOODQUAL	Character	1		
4	LIMITEDSUP	Character	1		
5	LARGEDEMND	Character	1		
6	RELADEALER	Character	1		
7	OTHER18_1	Character	2		
8	OTHER18_2	Character	2		
9	OTHER18_3	Character	2		
10	OTHER18_4	Character	2		
11	OTHER18_5	Character	2		
12	DES19_1	Character	2		
13	DES19_2	Character	2		#19
14	DES19_3	Character	2		
15	DES19_4	Character	2		
16	DES19_5	Character	2		
17	HEADBOAT	Character	1		#20
18	CHARTERBO	Character	1		
19	AFTERQUOTA	Character	1		#21
20	K_CH_LOSE	Character	1		#22 * K_NUM_ Numeric = 5
21	K_LOSE_P	Numeric	5	2	
22	S_CH_LOSE	Character	1		* S_NUM_ Numeric = 5
23	S_LOSE_P	Numeric	5	2	
24	INRATEHLF	Numeric	4		
25	INRATEFUL	Numeric	4		#23
26	OFFRATEHLF	Numeric	4		
27	OFFRATEFUL	Numeric	4		
28	GEAR_PCH	Character	1		
29	GEAR_1	Character	3		#16
30	GEAR_2	Character	3		
31	GEAR_3	Character	3		
32	GEAR_4	Character	3		
33	GEAR_5	Character	3		
34	GEAR_6	Character	3		
35	K_M89	Numeric	2		
36	K_M90	Numeric	2		#17
37	K_M91	Numeric	2		
38	K_PR89	Numeric	5	2	
39	K_PR90	Numeric	5	2	
40	K_PR91	Numeric	5	2	
41	S_M89	Numeric	2		
42	S_M90	Numeric	2		
43	S_M91	Numeric	2		
44	S_PR89	Numeric	5	2	
45	S_PR90	Numeric	5	2	
46	S_PR91	Numeric	5	2	
** Total **			123		

Structure for database: D:dealer.dbf
Number of data records: 3
Date of last update : 10/14/91

Field	Field Name	Type	Width	Dec	
1	DEALERID	Numeric	4		
2	SALESPERC	Numeric	4	2	#1
3	K_2	Character	1		#2
4	S_2	Character	1		
5	CERO_2	Character	1		
6	K_MONTH1	Numeric	2		#3
7	K_POUND1	Numeric	6		
8	K_MONTH2	Numeric	2		
9	K_POUND2	Numeric	6		
10	S_MONTH1	Numeric	2		
11	S_POUND1	Numeric	6		
12	S_MONTH2	Numeric	2		
13	S_POUND2	Numeric	6		
14	K_SUBST1	Character	3		#4
15	K_SUBST2	Character	3		
16	K_SUBST3	Character	3		
17	K_SUBST4	Character	3		
18	K_SUBST5	Character	3		
19	S_SUBST1	Character	3		
20	S_SUBST2	Character	3		
21	S_SUBST3	Character	3		
22	S_SUBST4	Character	3		
23	S_SUBST5	Character	3		
24	OUT_OF_STA	Character	1		#4b
25	OUT_STA_P	Numeric	4	2	
26	FROM_FLA	Character	1		
27	FROM_FLA_P	Numeric	4	2	
28	SUB_S_K	Character	1		#4c
29	K_HI_DOL	Numeric	5	2	#5
30	K_HI_LB	Numeric	6		
31	K_LO_DOL	Numeric	5	2	
32	K_LO_LB	Numeric	6		
33	S_HI_DOL	Numeric	5	2	
34	S_HI_LB	Numeric	6		
35	S_LO_DOL	Numeric	5	2	
36	S_LO_LB	Numeric	6		
37	K_HOOKL	Numeric	4	2	#6
38	K_GILL	Numeric	4	2	
39	S_HOOKL	Numeric	4	2	
40	S_GILL	Numeric	4	2	
41	OTHER_6	Character	15		
42	K_OTH_6	Numeric	4	2	
43	S_OTH_6	Numeric	4	2	
44	K_CENTS	Numeric	4	2	#7
45	S_CENTS	Numeric	4	2	
46	K_BOAT	Numeric	4	2	
47	K_VESSEL	Numeric	4	2	#8
48	K_CHART	Numeric	4	2	
49	OTHER_8	Character	15		
50	K_OTH_8	Numeric	4	2	
51	S_BOAT	Numeric	4	2	
52	S_VESSEL	Numeric	4	2	
53	S_CHART	Numeric	4	2	
54	S_OTH_8	Numeric	4	2	
55	K_WHOLE	Numeric	4	2	
56	K_PROCESS	Numeric	4	2	#9
57	K_MARKETS	Numeric	4	2	
58	S_WHOLE	Numeric	4	2	
59	S_PROCESS	Numeric	4	2	
60	S_MARKETS	Numeric	4	2	

* K_Hi_Mo - Numeric
* K_Lo_Mo - Numeric
* S_Hi_Mo - Numeric 2
* S_Lo_Mo - Numeric

61	OTHER_9	Character	15		
62	K_OTH_9	Numeric	4	2	
63	S_OTH_9	Numeric	4	2	
64	K_SE	Numeric	4	2	
65	K_TAMPA	Numeric	4	2	#10
66	K_OTH_FLA	Numeric	4	2	
67	K_NY	Numeric	4	2	
68	K_OTH_US	Numeric	4	2	
69	K_CARIB	Numeric	4	2	
70	K_OTH_10	Numeric	4	2	
71	S_SE	Numeric	4	2	
72	S_TAMPA	Numeric	4	2	
73	S_OTH_FLA	Numeric	4	2	
74	S_NY	Numeric	4	2	
75	S_OTH_US	Numeric	4	2	
76	S_CARIB	Numeric	4	2	
77	S_OTH_10	Numeric	4	2	
78	K_11_1	Numeric	4	2	
79	K_11_2	Numeric	4	2	#11
80	K_11_3	Numeric	4	2	
81	K_11_4	Numeric	4	2	
82	K_11_5	Numeric	4	2	
83	K_11_6	Numeric	4	2	
84	K_11_7	Numeric	4	2	
85	K_11_8	Numeric	4	2	
86	OTH_11	Character	20		
87	K_11_OTH	Numeric	4	2	
88	S_11_1	Numeric	4	2	
89	S_11_2	Numeric	4	2	
90	S_11_3	Numeric	4	2	
91	S_11_4	Numeric	4	2	
92	S_11_5	Numeric	4	2	
93	S_11_6	Numeric	4	2	
94	S_11_7	Numeric	4	2	
95	S_11_8	Numeric	4	2	
96	S_11_OTH	Numeric	4	2	
97	K_12_1	Numeric	4	2	
98	K_12_2	Numeric	4	2	#12
99	K_12_3	Numeric	4	2	
100	K_12_4	Numeric	4	2	
101	K_12_5	Numeric	4	2	
102	K_12_6	Numeric	4	2	
103	K_12_7	Numeric	4	2	
104	K_12_8	Numeric	4	2	
105	OTH_12	Character	20		
106	K_12_OTH	Numeric	4	2	
107	S_12_1	Numeric	4	2	
108	S_12_2	Numeric	4	2	
109	S_12_3	Numeric	4	2	
110	S_12_4	Numeric	4	2	
111	S_12_5	Numeric	4	2	
112	S_12_6	Numeric	4	2	
113	S_12_7	Numeric	4	2	
114	S_12_8	Numeric	4	2	
115	S_12_OTH	Numeric	4	2	
116	K_PREM	Numeric	6		#13
117	S_PREM	Numeric	6		
118	CUSTNAME	Character	30		
119	CUSTADD	Character	30		#14
120	CUSTCITY	Character	20		
121	CUSTSTATE	Character	2		
122	CUSTZIP	Character	9		

```
123  A15        Character      1
124  B15        Character      1
125  C15        Character      1
126  D15        Character      1
127  E15        Character      1
128  F15        Character      1
** Total **                   619
```

#15

Continued in Second database

```
. set print off
```

```
. list struc
Structure for database: D:dealer2.dbf
Number of data records:        3
Date of last update    : 10/14/91
Field  Field Name  Type        Width     Dec
    1  DEALERID    Numeric         5
    2  G15         Character       1
    3  H15         Character       1
    4  I15         Character       1
    5  J15         Character       1
    6  OTH_15      Character      15
    7  K15         Character       1
** Total **                       26

set print off
```

SPECIES LIST

Amberjack	103
Ballyhoo	105
Bait	182
Barracuda	459
Black Drum	123
Black Sea Bass	283
Blue	107
Blue Crabs	322
Bluerunners	109
Bonito (Little Tunny)	111
Bottomfish	291
Butterfish	453
Catfish	115
Cero Mackerel	220
Clams	849
Cobia	113
Cod	99
Crawfish	317
Croakers	119
Dolphin	121
Eels	125
Flounder	291
Goatfish	401
Goggleeyes (Scad)	117
Grey Snapper	205
Grouper	150
Grunts	151
Haddock	98
Herring	153
Jacks, Mixed	159
King Mackerel	165
Ladyfish	167
Lane Snapper	203
Live Rock (Algae)	812
Lobster	317
Mangrove/Grey Snapper (Mango)	205
Menhaden	173
Miscellaneous Food Fish	251
Moonfish	159
Mullet	175
Mutton Snapper	207
Permit	181
Pollock	97
Pompano	183
Porgy	247
Red Snapper	209
Reeffish (Red Drum)	185
Sand Perch	187
Scad	117
Scalefish	94
Scamp	139

Scrod	93
Sea Bass	189
Seatrout	193
Shad	197
Shark, Mixed	199
Sheepshead (Sand Bream)	201
Shinners (Bait)	182
Shrimp (Other, heads on)	344
Silver Mullet	177
Snapper, Mixed	218
Spanish Mackerel	219
Sponge (Others)	359
Spot	225
Squid	347
Stone Crabs	327
Swordfish	229
Tarpon	97
Tilefish	231
Triggerfish	234
Tropicals	95
Vermillion Snapper(B-Liner/Mingos)	213
Wahoo	245
Whiting	249
Wreckfish	405
Yelloweye Snapper (Silk Snapper)	211
Yellow Fin Tuna	243
Yellowtails	215

GEAR

1. "Hook & Line":

101. Wire Line & Spoons
102. Rods & Reels
103. Paraveins
104. Bottom Fishing Gear
105. Terminal Tackle
106. Manuals
107. Electric Reel
108. Poles
109. Trolling Cigar minnows
110. Trolling 30# class tackles
111. Cable & Hooks
112. Outriggers
113. Bug Reels
114. Piano wire
115. Monofilament Handlines
116. Downriggers
117. Deep drop reels
118. Surf equipment
119. Light spinning
120. Deepwater reels & tackle
121. Live bait wells
122. Planers
123. Bandit reels and gear
124. Jigging
125. Small jigs & reels
126. Spinning or light conventional trolling
127. Hooks & sinkers
128. Yo Yo's
129. Spin cast & troll
130. Electric bottom reels
131. Jerk lines
132. Electramates
133. Tackle
134. Lures
135. Reels
136. Line and hooks
137. Snaps mono
138. Swivels
139. Hooks
140. Rods

2. "Gillnets":

201. Bigger size mesh gillnets
202. Stab gillnet
203. Spot, jack, trammel, mullet, drift, pompano, bluefish net
204. Shark net
205. New net
206. Smaller size mesh gillnet

3. **"Other":**

301. Seine
302. Longline spool
303. Rakes
304. Traps
305. Sponge hooks
306. Shrimp gear
307. Scuba gear
308. Dive & trap gear
309. Wing nets
310. 4 x 8' Butterfly trawls
311. Castnets
312. Wood traps
313. Long line for groupers
314. Larger nets
315. Crawfish/Lobster traps
316. Trap hauler
317. Drift line
318. Shark Line & Reel

4. **"Miscellaneous":**

401. Lead
402. Electronics
403. Hydraulics
404. Seabass Traps
405. Ropes
406. Twin
407. Dip
408. Chemicals & Nets
409. Longer Anchor Line/Anchor
410. Tanks & Pumps for Bait
411. Fish Finder
412. Trammel Lines
413. Bigger Fishboxes
414. Heavier equipment
415. Trailer
416. Nets (other than gill)
417. Crimp pliers
418. Line cablecutters
419. Cable
420. Colorscope
421. Clam boat
422. Insulated box
423. Knives
424. Net boat

OPTIONS FOR #18

1. "Limited Supply":

10. Time of year
11. Limited supply of fish
12. Season just beginning
13. Gulf was closed/Closure of season in the Gulf
14. The nets weren't set
15. Low availability
16. Scarcity of Fish
17. Panic buying
18. Quota filled
19. Bad weather

2. "Quality":

21. Keep on ice
22. Fresh fish
23. Properly iced down
24. Ice & salt water
25. No net marks
26. Firm fish
27. Careful handling

3. "High Demand":

31. Maximum price from buyer
32. Lent/Easter

4. "Excess Demand":

41. Plenty of supply = less money
42. Commercial net boats determine price of kings
43. Poor price due to imports

5. "Miscellaneous":

50. "That's all they pay"
51. Dealer sold fish from his own store
52. Large fish
53. Dealer is a crook
54. Price fixing
55. Dealer sets price
56. Dealer knew quota was going to be filled early
57. Fast off-loading
58. Going rate
59. Demise of gill nets

OPTIONS FOR #19

1. "Icing Practices":

1A. Cooler water temperature
1B. Kept in ice
1C. Fish were very fresh
1D. Cool weather
1E. Brined fish
1F. Put immediately into chill box
1G. Full shade
1H. Fish still alive when iced
1I. Fish spread out

2. "Gutting Practices":

2A. Gutted properly
2B. Cleaned and dressed immediately
2C. Immediate removal of fish from net

3. "Non-sequitur":

3A. High demand & low supply
3B. Short season
3C. Lots of fish
3D. Price fixing
3E. Market controls price
3F. Less fish on market
3G. King mackerel quota filled
3H. Best price before gillnets set
3I. Fish migrate back north
3J. Politics
3K. Plenty of feed
3L. Because you are lucky
3M. Beds of mackerel not hit as hard by big boats/smaller boats could catch some
3N. Hand line fish only

4. "Miscellaneous":

4A. Picky chefs
4B. Lack of worms
4C. Fat fish
4D. Good winter migration from north
4E. Large nets
4F. Short half to one day trips/Sold on same day
4G. Size/Smokers
4H. Hook and line not nets
4I. Caught at night
4J. Less weight stacked on fish at the market
4K. Lack of netting
4L. Steaked for Cuban market
4M. Catch small quantities of fish at a time
4N. Caught and sold the same day
4O. Limited competition from other fishermen

PRODUCT FORMS

1. Round fresh
2. Round frozen
3. Fillet frozen
4. Steaked
5. Smoked
6. Fresh fillet
7. Whole fresh
8. Processed for bait
9. Other, unknown

COMMERCIAL TRIP
TICKET RESULTS

CONTENTS PROCEDURE
CONTENTS OF SAS MEMBER WORK.CONTENT1

CREATED BY CMS USERID RMP ON CPUID FF-4381-017482
AT 16:17 MONDAY, DECEMBER 2, 1991 BY SAS RELEASE 5.18
FILE= WORK CONTENT1 BLKSIZE=32712 LRECL=221 GENERATED BY DATA
NUMBER OF OBSERVATIONS: 2109 NUMBER OF VARIABLES: 23
MEMTYPE: DATA

----ALPHABETIC LIST OF VARIABLES AND ATTRIBUTES-----

#	VARIABLE	TYPE	LENGTH	POSITION	FORMAT	INFORMAT	LABEL
8	ADDRESS	CHAR	36	94			
12	AREACODE	CHAR	3	159			
9	CITY	CHAR	23	130			
6	COUNTY	NUM	2	56			
19	EFFDATE	NUM	4	193			
20	EXPDATE	NUM	4	197			
17	FULLTIME	CHAR	1	172			
14	INDVES	CHAR	1	169			
23	K_TRIPS	NUM	8	213			
22	KINGS	NUM	8	205			
21	LMNUM	NUM	4	201			
7	NAME	CHAR	36	58			
18	PRIMOCC	CHAR	20	173			
15	RESIDENT	CHAR	1	170			
16	RESTRSPP	CHAR	1	171			
3	SP_TRIPS	NUM	8	20			
2	SPANISH	NUM	8	12			
1	SPL	CHAR	8	4			
10	STATE	CHAR	2	153			
13	TELEPHON	CHAR	7	162			
4	VESSEL	CHAR	8	28			
5	VESSNAME	CHAR	20	36			
11	ZIPCODE	NUM	4	155			

---------- SOURCE RECORDS ----------

```
] DATA CONTENT1;                                                    ]
]    SET LIC89.MACKFISH;                                            ]
]                                                                   ]
```

Tom Gardner, Executive Director

FLORIDA DEPARTMENT OF NATURAL RESOURCES

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Gerald Lewis
State Comptroller
Tom Gallagher
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Bob Crawford
Commissioner of Agriculture
Betty Castor
Commissioner of Education

April 2, 1991

Mr. Robert Palmer, Economic Analyst
Marine Fisheries Commission
Koger Executive Center, 106 Douglas
3900 Commonwealth Bloulevard
Tallahassee, Florida 32399

Dear Bob:

Please find enclosed the mackerel mailing labels that you requested and a diskette containing the dBase IV files from which they were generated. I have also made a tape back-up of the SAS files containing the information about each dealer and fisherman.

The tape is number 1781 and should be labelled: MACKEREL MAILING LABELS. I used the CMS, TAPE DUMP command to write these files to the tape. So, you should use TAPE LOAD *filename,* to copy the files from the tape. TAPE SCAN will show you that there are two SAS data files: MACKFISH LIC89 and MACKDEAL LIC89. MACKFISH LIC89 contains the informations about each fishermen, including their SPL. MACKDEAL LIC89 contains the dealer number and the information about each dealer. I have tried to eliminate redundant entries when possible, but I am sure that some remain. There also appear to be a number of SPL's for which there was no matching name or other information. Most are probably misrecorded numbers of fishermen already included in the file. I have removed those records from the tape file. An example record from each file is included with this letter to show the format of each. Most of the fields are self-explanatory; a few, however, are somewhat cryptic. EFFDATE is the effective starting date for the license. EXPDATE is the expiration date for the license. INDVES indicates whether the license is for an individual or vessel. K_TRIPS is the number of trips on which king mackerel were landed. KINGS is the total weight of king mackerel landed. LMNUM is simply the numeric part of the SPL. RESIDENT contains one of three codes; R = Florida resident, N = non-resident US citizen, and A = non-resident alien. RESTRSPP indicates restricted species status. SP_TRIPS is the number of trips on which Spanish mackerel were landed. SPANISH is the total weight of Spanish mackerel landed.

The dBase IV files are saved on a high density 3.5" diskette. There are three database files on the diskette, MACK89.DBF, MACKFISH.DBF, and MACKDEAL.DBF. MACKDEAL.DBF contains the dealer addresses, MACKFISH.DBF contains the fishermen addresses, and MACK89.DBF contains both. Copies of the structure of each file are enclosed. The SPL field in the MACKDEAL.DBF file actually contains the dealer number. The SPPLAB field contains the species code. REPS contains the number of duplicates of that license in the original file. DEAL_FISH contains the code for whether the record is for a fisherman (F) or a dealer (D). Other support files are also on the diskette, including the label format files. To print or view the mailing labels in zipcode order, enter the following commands from the dBase dot prompt:

USE MACKFISH (or MACKDEAL, depending on the desired data)
SET ORDER TO ZIPCODE
MODI LABEL MACK89

You will be presented with a menu screen showing the format of the labels and allowing alterations as well as printing. You gain access to the menus at the top of the screen by pressing F10.

I used nearly two full boxes of mailing labels during the printing. There are three copies each of the dealers and the fishermen list. Each label has the full name and address, and a code (xx-x) in the upper right corner describing if that record is a fisherman (F) or dealer (D), and whether they caught Spanish mackerel (S), king mackerel (K), or both (SK). Each strip of labels is separate and sorted in zip code order. Some of the stacks are broken in the middle as well, where printing mistakes were corrected. There is also a forth large stack at the bottom of one of the boxes, which is an <u>incomplete</u> list of the fishermen in alphabetical order. You might find that useful for your second wave.

Call me if you have any problems using or locating any of the files. Good luck with the survey. We will be interested to see the results.

Sincerely,

DIVISION OF MARINE RESOURCES

James E. McKenna, Jr.

James E. McKenna, Jr., Ph.D.
Fisheries Biologist
Fisheries Statistics Section

JEMcK/jlw
Enclosures
FILE: C:\WP51\JMCKENNA\PALMRMAC.LTR
(COMPANION FILE, DBASE FILE STRUCTURES: PALMRMAC.DBS)

Sample record from MACKFISH LIC89:

SPL:	SP000003
SPANISH:	2
SP_TRIPS:	1
VESSEL:	_____
VESSNAME:	_____
COUNTY:	15
NAME:	HILL ROLAND B
ADDRESS:	P O BOX 45
CITY:	GRANT
STATE:	FL
ZIPCODE:	32949
AREACODE:	305
TELEPHON:	7270976
INDVES:	N
RESIDENT:	R
RESTRSPP:	_
FULLTIME:	N
PRIMOCC:	FISH HOUSE MGR.
EFFDATE:	880815
EXPDATE:	890630
LMNUM:	3
KINGS:	_____
K_TRIPS:	_____

****

Sample record from MACKFISH LIC89:

COUNTY:	23
NUM_TRIP:	1
YEAR:	89
DEALER:	RC000824
COAST:	1
SPANISH:	515
KINGS:	3953
SP_TRIPS:	5
K_TRIPS:	8
DEALNAME:	J.C. DOBSON
ADDRESS:	40 S.W. 31ST ROAD
CITY:	MIAMI
STATE:	FL
ZIPCODE:	331292805
PHONE:	3058540507
FIRSTNAM:	J.C.
LASTNAME:	DOBSON

Database Structure: B:\MACKFISH.DBF. No. of data records: 2221. Last update: 03/28/91

FIELD	FIELD NAME	TYPE	WIDTH	DEC	INDEX
1	SPL	Character	8		N
2	LASTNAME	Character	35		N
3	FIRSTNAME	Character	11		N
4	MIDDLE	Character	4		N
5	ADDRESS	Character	35		N
6	CITY	Character	20		N
7	COUNTY	Numeric	2		N
8	STATE	Character	2		N
9	ZIPCODE	Character	6		Y
10	SPPLAB	Character	2		N
11	REPS	Numeric	3		N
12	DEAL_FISH	Character	1		N
	** TOTAL **		130		

Database Structure: B:\MACKDEAL.DBF. No. of data records: 219. Last update: 03/28/91

FIELD	FIELD NAME	TYPE	WIDTH	DEC	INDEX
1	SPL	Character	8		N
2	LASTNAME	Character	35		N
3	FIRSTNAME	Character	11		N
4	MIDDLE	Character	4		N
5	ADDRESS	Character	35		N
6	CITY	Character	20		N
7	COUNTY	Numeric	2		N
8	STATE	Character	2		N
9	ZIPCODE	Character	6		Y
10	SPPLAB	Character	2		N
11	REPS	Numeric	3		N
12	DEAL_FISH	Character	1		N
	** TOTAL **		130		

Database Structure: B:\MACK89.DBF. No. of data records: 2440. Last update: 03/28/91

FIELD	FIELD NAME	TYPE	WIDTH	DEC	INDEX
1	SPL	Character	8		Y
2	LASTNAME	Character	35		N
3	FIRSTNAME	Character	11		N
4	MIDDLE	Character	4		N
5	ADDRESS	Character	35		N
6	CITY	Character	20		N
7	COUNTY	Numeric	2		N
8	STATE	Character	2		N
9	ZIPCODE	Character	6		Y
10	SPPLAB	Character	2		N
11	REPS	Numeric	3		N
12	DEAL_FISH	Character	1		N
	** TOTAL **		130		

FILE: C:\WP51\JMCKENNA\PALMRMAC.DBS COMPANION FILE: PALMRMAC.LTR

BIBLIOGRAPHY

[redacted]

COASTAL PELAGIC RESEARCH BIBLIOGRAPHY

1. Adams, Charles M. and Frank J. Lawlor (November 1989) Trends in the Importation of Selected Fresh and Frozen Seafood Products into the Southeastern United States. FSG Tech. Paper 59: Gainesville, Florida.

2. Anonymous (April 1991) 1991 Report of the Mackerel Stock Assessment Panel Meeting. NMFS; SEFC: Miami, Florida.

3. Cato, James C. (October 1978) Commercial Fishing Vessel Size in Florida. Prepared for the Small-Scale Fishermen Workshop. Woods Hole Oceanographic Institute: Woods Hole, Massachusetts.

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COASTAL PELAGICS SURVEY RESEARCH, CM-287

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CM - 287

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