South Atlantic Shrimp System Overview

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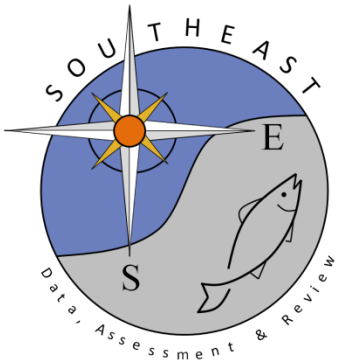

SOUTH ATLANTIC SHRIMP SYSTEM

OVERVIEW

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PURPOSE:

This document is an adaptation of a document originally written in June of 1990. It is intended as an overview of the data collection program

INTRODUCTION:

The Southeast Fisheries Science Center SEFSC, in cooperation with the South Atlantic states, collects South Atlantic shrimp data from dealers and fishermen and archives these data on the Sefhost computer. These data are collected to provide catch, value, area caught, and effort data for individual commercial fishing trips. It should be noted that some states are not providing effort data. Although this objective is never totally achieved, the SEFSC's data do provide a near-census of the commercial catches, the majority of which are for consolidated trips. This documentation has been prepared to describe the structure of the computer files in which these data are stored.

HISTORY

The historical South Atlantic shrimp data collection dates back to 1956 when hard copy reports were published reporting commercial catches by state, port, month, species, size, pounds (heads-on), and value of shrimp landed. These reports are published and available through 1978. Starting with 1962, these reports were computerized; however, the computerized reports do not contain species or size compositions.

Beginning in 1979 for the states of North Carolina, South Carolina, Georgia, and the Florida East Coast in 1981, the detailed shrimp statistics data collection system became operative. This system was designed by the Shrimp Technical Committee of the South Atlantic States Marine Fisheries Commission and was oriented towards individual trip data collection. Beginning in 1982, the SEFSC and the four coastal states in the South Atlantic established a cooperative program for the collection and processing of shrimp statistics. Although the data collection and processing were shared by the SEFSC and the State Cooperators, it was agreed that the data would be maintained on a mainframe computer owned by the

NMFS, but accessible by all partners. Currently, these data are stored on the NMFS Sefhost computer in Miami, Florida.

After 1992, North Carolina and Florida quit collecting detailed shrimp information. The Florida data does not include Monroe County or bait shrimp. South Carolina data includes mariculture shrimp and Georgia includes bait shrimp.

Data Base Description and Record Format

As established by the Shrimp Technical Committee, data for this data base are collected for individual trips. A trip is defined as the time when a vessel (or boat) departs to conduct fishing activities until the vessel (or boat) returns and unloads its catch. Port samplers that collect the data from seafood processors and dealers are instructed to prepare a separate data entry form or schedule for each trip that the dealer has sales information for.

The organization of the data in the data base also follows the trip concept. However, because the data base uses a fixed-record format, it is likely that more than one record exists for a single trip. The reason for multiple records per trip is that a single record is used for each species, size and area/subarea where the shrimp were reportedly caught. Thus, if both pink and brown shrimp were caught in two separate areas, then there would be four records associated with this fishing trip. The user must be aware of this organization when using the data base. It is recommended that when users need information about individual fishing trips, the data be sorted by schedule number, port, date and dealer number. Sorting the data with these parameters (fields) will assure that all of the records associated with a single trip will be physically located together in the (sorted) data file. For trip effort information, the file needs to be indexed on state, year, month, day, county, dealer, schedule unique.

It should also be noted that the number of trips is recorded in one of two fields. If the trip was made by a vessel (i.e., a craft that is five net tons or greater), the number of trips is recorded in the Vessel Trip field, i.e., the 10th field in the record (note, the record format and field names are provided in the Appendix). If the trip (or trips) was (were) made by a boat, then the number of trips is recorded in the Boat Trip field, i.e., 11th field in the record. Thus, if the user wants the total number of trips, then the values in both of these fields must be summed. For the majority of the records, the value in either of these two fields is 1; however, port samplers do combine information from more than one trip on a single schedule in some situations. For example, if the identification numbers for several vessels are not known, then the port agents are instructed to consolidate the data from these trips into one schedule for the same date of return. Trip consolidation is also used when the trips are made by boats because they do not have a registration number that has been issued by the U.S. Coast Guard, and the data collection policy is not to record data by state registration number. In addition, port agents in

Georgia have been instructed not to record vessel identification number, either Coast Guard or State registration numbers. Beginning in 1991 for South Carolina, the number in the vessel field is total trips of vessels and boats - not total trips for vessels.

The U.S. Coast Guard registration number is provided in the 14th field, Vessel ID Number. If the trip is for a single vessel and the U.S. Coast Guard number is unknown, 999999 is entered in the ID Number field. For consolidated schedules and the records for fishing that occurred in Georgia, this field is filled with zeros.

Calendar Days Fished is a record of the trip duration, described as the number of days spent fishing on a particular trip. Days, in this case, are defined as any part of a day (12:01 A.M. to midnight) in which a craft actually catches or tries to catch shrimp. When more than one area or subarea is fished during a trip, the calendar days are prorated according to the percentage of time spent fishing in each area for that trip. In this case the calendar days fished may include decimals and would give the total trip duration only when added to calendar days of other listings with the same schedule number, port number, date, and dealer number.

South Carolina has two sources of Calendar Days Fished data. Forty percent of the data is reported by shrimp dealers, with the remaining data calculated by port agents. Prior to 1986, Calendar Days Fished was assigned by the agent based only on the amount of the catch and size of the vessel. Since 1986, all data not supplied by dealers is assigned by comparing trip tickets with the last date of unloading, along with the amount of the catch and the agent's fishery knowledge. Beginning in 1991, South Carolina stopped collecting effort data.

The Tenths of Days Fished field is a number obtained by dividing the actual number of hours that the net was in the water while fishing in a particular area by 24. This result is given in decimal form. (For example 090 would be 9 days fished and 003 would be .3 days fished.) In South Carolina this field shows the actual tenths of days fished only for those trips in which an interview was conducted - about five percent. For all other trips, 7.5 is assigned to this field.

The point of landing is listed by state and county in the first two fields. In South Carolina, however, the state and county listed are for the first point of purchase, rather than the point of landing.

The shrimp data includes a grading code which gives information about whether the shrimp size listed is based on the actual size after sorting (code 2) or on an average catch size (code 1). Georgia and South Carolina do not follow this coding system.

Instead, Georgia codes all shrimp as 1 whether they have been sorted and graded or not. For South Carolina, a coding of 1 means that either no grading occurred or that only one grade was recorded for the trip. Code 2 signifies that the catch was graded and that more than one grade was landed.

The distance from shore a catch was taken is given in the Subarea field for all offshore areas. An offshore area is generally described as being a geographic location extending from any point of land on the coast line out to the open ocean excluding sounds, inlets, rivers, bays, intercoastal waterways, etc. These offshore areas are further divided by subareas which are in three distinct groups according to distance from the shore line; i.e. 0-3 miles, 3-12 miles, and 12-200 miles. Inshore areas are generally described as bodies of saltwater other than offshore areas including sounds, inlets, bays, tidal portions of rivers, estuaries and other salt or brackish water.

Area and subarea fields may show the following irregularities. The subarea code 00 is given by Georgia port agents when the subarea is unknown. In South Carolina, the county code 64 is used for both Jasper and Beaufort counties.

Pounds: The quantity for each species and size. The quantity is the actual weight of the shrimp in pounds, heads-off.

Unit Cost is the average ex-vessel price per pound paid to the fisherman for heads-off shrimp for each species and size reported. The ex-vessel price does not include charges for unloading, grading, icing, packing, cartage, etc. The unit cost is obtained from dealers' records, personal observation, and from information acquired through interviews. For landings in South Carolina, ex-vessel price data have been assigned by computer algorithm based on monthly dealer prices and known packing and heading costs.

Identification of commonly co-occurring shrimp species in South Carolina is carried out by applying the results of independent state surveys to all commercial catches. These surveys are conducted in the following way: Prior to 1985, species composition was determined by counting the proportion of each species in a sample of fifty shrimp and applying that result to the entire catch. The current procedure uses samples weighing two to three pound that contain at least 50 shrimp each. These samples are sorted by species and are then weighed, giving an estimate of the species make-up for that trip and grade.

The Date of Landing field gives the unloading date for a trip by month, date and year. South Carolina gives the exact unloading date only for those landings which are recorded by trip tickets -about 70 percent. Information for the remaining landing dates is reported via monthly dealer reports which give the landing date as the 15th of the month, unless the trawling season was not open for the entire month for that area fished. In this case the date is

coded with the modal day. In 1991 South Carolina started coding the date of landings as 7, 14, 21 and 28 (first week, second week etc.) Day 29 would represent days 29, 30 and 31, and Day 15 would represent a monthly report. North Carolina dates most of its consolidated schedules on the Friday of each week because nearly all buyers calculate weekly catch totals and settle accounts with the fishermen on Friday.

SOUTH ATLANTIC SHRIMP FORMAT
of the Flat files as
they were stored on the A10

COLUMN	FIELD
1 - 2	State Landed
3 - 4	County Landed
5 - 8	Area Caught
9 - 10	Distance From Shore
11 - 13	Dealer Number
14 - 19	Date Landed(mmddyy)
20 - 22	Schedule Number
23	Grading
24	Gear Code
25 - 30	Vessel Trip
31 - 36	Boat Trips
37 - 39	Calendar Days Fished
40 - 44	Tenth Of Days Fished
45 - 50	Vessel ID Number
51	Species Code
52 - 53	Size
54 - 58	Pounds Caught (heads off)
59 - 62	Unit Cost (price per pound)
63 - 65	Filler

STATE CODES

STATE CODE	STATE
36	North Carolina
43	South Carolina
13	Georgia
10	Florida (east coast)

COUNTY CODES

NORTH CAROLINA	SOUTH CAROLINA	GEORGIA	FLORIDA
Dare (90)	Horry (60)	Chatham (33)	Nassau (22)
Hyde (91)	Georgetown (61)	Bryan (34)	Duval (23)
Beaufort (92)	Charleston (62)	Liberty (35)	St.Johns (24)
Pamlico (93)	Colleton (63)	McIntosh (36)	Volusia (25)
Carteret (94)	Beaufort (64)	Glynn (37)	Brevard (26)
Onslow (95)		Camden (38)	St.Lucia (27)
New Hanover (96)			
Brunswick (97)			
Pender (98)			
Craven (99)			

AREA AND SUBAREA CODE FORMATS

AREA	SUBAREA CODE	DESCRIPTION
XXX0	X1	Offshore location of 0 to 3 miles
XXX0	X2	Offshore location of 3+ to 12 miles
XXX0	X3	Offshore location of 12+ miles
XXXZ	XX	Inshore location

(X is any digit 0 to 9, Z is any digit 1 to 9

GEAR TYPE

Shrimp Trawl (A)
Channel Net (B)
Butterfly Net (C)
Other [prior to 6/84] (D)
Pound Net [after 6/84] (D)
Crab Trawl (E)
Fish Trawl (F)
Cast Net (G)
Seine (H)
Skimmer Trawl (I)
Other (Z)

GRADING CODE

1 - Average Size Caught
2 - Actual Size

SPECIES

1 - Brown
2 - Pink
3 - White
4 - Sea Bobs
5 - Royal Red
6, 7, & 9 - Aquaculture
8 - Rock
B - Bait

SIZE - NUMBER OF SHRIMP PER POUND

11 - Under 15
21 - 15 - 20
31 - 21 to 25
41 - 26 to 30
51 - 31 to 35
52 - 36 to 40
61 - 41 to 45
62 - 46 to 50
71 - 51 to 55
72 - 56 to 60
81 - 61 tp 70
91 - Over 70