

**Description of the Databases that Contain Landings of Shark Species
from the Atlantic Ocean and Gulf of Mexico**

Heather Balchowsky
Sustainable Fisheries Division
Southeast Fisheries Science Center
75 Virginia Beach Drive
Miami, FL 33149

John Poffenberger
Sustainable Fisheries Division
Southeast Fisheries Science Center
75 Virginia Beach Drive
Miami, FL 33149

October 2005

The responsibility for collecting the quantities and value of marine resources (also referred to as 'landings statistics') landed at ports along the Atlantic Ocean and Gulf of Mexico is divided between the Southeast Fisheries Science Center (SEFSC) and the Northeast Regional Office (NERO). Consequently, the landings data for the various species of sharks that are unloaded at dealers located in the Gulf of Mexico or in states along the coast of the Southeastern Atlantic Ocean, or the Southeast Region (i.e., the Atlantic coast south of Virginia), are collected and managed by the SEFSC, Miami, Florida, while the landings of sharks at dealers located in the Northeast Region (north of North Carolina) are reported to and managed by the NERO in Gloucester, Massachusetts. The purpose of this report is to describe (1) the procedures that are used by both the SEFSC and the NERO to collect the data and (2) the databases that house the landings statistics for sharks. The report presents details of the two programs that have been implemented by the SEFSC. The first system is the Pelagic Dealer Compliance program (PDC) and is formerly known as the Quota Monitoring System (QMS; from 1997 to 2002) (please note that 'QMS' now refers to a separate system used by the SEFSC to monitor quotas of groupers and tilefish) and the Swordfish Dealer Compliance (SDC) program (from 1993 to 2000). The second system is the general canvass landings data that are housed in the Accumulated Landings System (ALS). The report also contains a description of the SAFIS (Standard Atlantic Fisheries Information System) that is used by dealers in the Northeast region to report landings data to the NERO.

It should be noted that the data from the PDC and SAFIS are summarized by the SEFSC into monthly reports and sent to the Highly Migratory Species Division, National Marine Fisheries Service. This summary is used to monitor the respective fishery quotas for sharks.

Pelagic Dealer Compliance Data

The Pelagic Dealer Compliance (PDC) database contains data collected by the SEFSC from dealers that meet the following criteria: 1.) the dealer has a Federal dealer permit for sharks, swordfish and/or tuna (except Bluefin tuna); 2.) the dealer is selected by the SEFSC to report; and 3.) the dealer is located in the Southeast Region (North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Puerto Rico, or the U.S. Virgin Islands). A dealer must have a federal permit in order to purchase shark, swordfish, and/or tuna products from a federally permitted vessel.

When selected, the dealers are required to submit a report with the landings (purchases) of any species in the highly migratory species management unit that were purchased from U.S. vessels fishing in the Gulf of Mexico and Atlantic Ocean. The dealers are required to submit a report twice a month and the report must be submitted within five days of each two-week reporting period. Currently all dealers with one or more of these highly migratory species permits are selected to report.

Dealers are required to provide dressed weight, price per pound and vessel information on each HMS species. If no purchases of HMS products are made during a reporting period, the dealer is required to send a report indicating such. All reports are date-stamped upon receipt (since mid-2004), and then either scanned or manually entered into the system. After the data passes either a computerized validation check or visual verification, the data are programmatically entered into a master Oracle table.

As noted above, the PDC only includes data from dealers that have a Federal permit and are selected to report. Consequently, the landings data in the PDC database may not be as comprehensive as the general canvass landings data in the Accumulated Landings System because not all dealers have a Federal permit and are selected to report. It should be clarified that if a dealer decides to purchase shark (or other HMS products) from federally permitted vessels, the dealer must obtain a Federal permit for these species. However, if a dealer buys these products only from vessels without federal permits, the dealer does not need to acquire a federal permit for these purchasing activities. Therefore, records of these species will not be in the PDC, but will be represented in the general canvass landings data. The general canvass data provide a supplement to data in the PDC for some purposes, but cannot be used to monitor fishery quotas because of the timeliness of data availability (as little as six months). In addition to more timely data, the data in the PDC provide greater detail in species composition for sharks than is available in the general canvass statistics.

Some additional caveats of the data in the PDC include swordfish and tuna purchases that were not entered into the database between 1997 and 2001, and not all dealers provide price per pound or vessel information when reporting purchases for a given reporting period. Additionally, due to the summary nature of the HMS Dealer Reporting form, the precise locations of landed products cannot be determined. Therefore, all products purchased by a given dealer are assigned to the state where the facility is located, rather than the state the products were landed. State assignment for the state of Florida is separated into 'Florida, East coast', 'Florida, Inland', and 'Florida, West coast'. Landings purchased at dealer facilities located in the Florida Keys are assigned to 'Florida, West coast.' Lastly, because no enforcement methods are available to ensure proper reporting by dealers (e.g., withholding permit renewal for lack of reporting), the landings data in the PDC may be under-reported. This is despite the fact that all dealers with a highly migratory species permit (shark, swordfish, or tuna) are selected to report. The PDC database does include a method with which non-reporting dealers can be identified.

The PDC system allows fisheries managers to monitor the status of the shark fisheries by imposing a fishing moratorium before the fishing quota for a shark species group (e.g., Large Coastal Sharks, Small Coastal Sharks, and Pelagic Sharks) is exceeded and to encourage protection of prohibited shark species. The PDC database also provides managers with a method to compare and quality control the landings data for species in the HMS Fishery Management Plan.

The Pelagic Dealer Compliance program (PDC) was referred to as the Quota Monitoring System (QMS) from 1997 to 2002, as well as the Swordfish Dealer

Compliance (SDC) program from 1993 to 2000 (please note that 'QMS' now refers to a separate system used by the SEFSC to monitor the quotas of several reef species, including red groupers and tilefish). Data column names in the PDC are listed in Appendix A. The name and contact information for the data manager is listed in Appendix B.

General Canvass Data

The general canvass landings statistics are stored in the Accumulated Landings System (ALS) and have been collected by the NOAA Fisheries Service and its predecessor since the early 1960's. These data consist of information on the quantity and value of seafood products caught by fishermen and sold to licensed seafood dealers or brokers. During the 1970's and early 1980's, the general canvass landings statistics were collected by field agents stationed at fishing ports throughout the Southeast region (i.e., south Atlantic and Gulf of Mexico). The agents visited all of the seafood dealers in their respective areas of coverage and recorded the quantity and value for each species purchased by the dealers. Consequently, the general canvass statistics are monthly summaries of the quantities of all species landed at (i.e., purchased by) each licensed seafood dealer. In order to provide information about the fishing activity, information on gear and fishing location were estimated by the local field agents and added to the general canvass data.

In the mid-1980's, the SEFSC negotiated cooperative agreements with the eight coastal states, Puerto Rico, and the U.S. Virgin Islands to exchange confidential fisheries data that are collected by either the National Marine Fisheries Service or the respective state partners. At that time, some of the states had initiated data collection programs and had begun to collect landings statistics. Under the cooperative agreements, the SEFSC did not need to continue to collect these data, but received them from the respective state and stored them in the ALS. Thus, the ALS became a regional database for all landings statistics for the Southeast Region.

Landings statistics are collected by the respective state fishery agency in one of two methods. Some states have implemented regulations that require all licensed seafood dealers to report the data for each trip. Some states, on the other hand, continue to follow the general canvass procedures that require licensed seafood dealers to report the landings for an entire calendar month. The following is a chronology of when each state implemented or plans to implement a trip ticket program.

In 1985, Florida became the first state to implement a trip ticket program. In 1995, the state of North Carolina passed a license-to-sell law that required seafood dealers to report all landings statistics by trip and identify the vessel or individual that sold the product. In 1997, Louisiana initiated their trip ticket program and in 1999 Georgia initiated a trip ticket program to begin in 2000. South Carolina and Alabama initiated trip ticket programs in 2001 and 2002, respectively. Mississippi has trip ticket requirements for most of their fisheries, and Texas is in the process of developing a trip ticket program that was scheduled to begin October 2005.

In order to maintain the 30+ year time series for the general canvass statistics, the trip ticket data from each of the states are summarized by species, gear, fishing area, and dealer and stored in the ALS database. Because the states require the dealers to provide information on fishing gear and location, it is no longer necessary for the field agents to estimate this information. Consequently, the gear and fishing area information are from estimates by the local field agents until the time that the respective state implemented their trip ticket program. At that time, all of the information are provided by the dealer on the trip ticket form.

Although the SEFSC does not collect the general canvass data, individuals within the SEFSC have been assigned the responsibility of coordinating the transfer of the data from the respective states fisheries data collection program and assuring that these data are consistent with the general canvass data already in the ALS. The following SEFSC staff members have these responsibilities for the associated states: David Gloeckner (North Carolina, South Carolina, and Georgia), Charlie Schaefer (Florida), and Josh Bennett (Alabama, Mississippi, Louisiana, Texas, Puerto Rico, and U.S. Virgin Islands). The data managers are located in different physical locations, but are all organizationally located in the Sustainable Fisheries Division, SEFSC. Their contact information is included in Appendix B.

There are two shortcomings associated with fishery statistics that are collected from seafood dealers by the state. First, dealers do not always record the specific species that are caught. For some species, notably sharks, the landings are recorded as the general category, “unclassified sharks”, and are not reported by the individual species. The reason for this generic reporting is that many species of sharks are unidentifiable when they have been headed and gutted at sea and landed as a “tube” or a “log”. Second, fish or shellfish are not always purchased at the same location where they are landed, but are instead unloaded and immediately shipped to another location. This practice can add additional uncertainty to the information on fishing area and gear.

Data column names in the ALS are also listed in Appendix A.

SAFIS Data

The Standard Atlantic Fisheries Information System (SAFIS) is an online application that allows seafood dealers in the Northeast Region to enter landings statistics that meets both the respective state and NMFS reporting requirements. On May 1, 2004, the NMFS, NERO implemented requirements that all dealers with a Federal permit issued by the NERO must submit their landings data for each trip and do so electronically. The database associated with SAFIS contains the trip ticket data submitted by the federally permitted seafood dealers. While most of these dealers are located in the northeast (Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, or Maine), any dealer that has been issued a permit by the NERO (e.g., Tuna, Multispecies, etc.) is required to

report their purchases electronically. This includes dealers in states that are located in the Southeast Region

Prior to May 2004, these data were collected either directly from dealers through federal field agents during dockside interviews or through a state's trip ticket program, contingent upon the data collection method of the state. This historical data set, now referred to as the "CFDBS", Commercial Fisheries Database Service (formerly known as the Dealer Weigh-Out database), is stored on the SOLE server and maintained in Gloucester. Between these two databases (SAFIS and archived Dealer Weigh-Out data), either summary or individual trip data can be accessed for seafood products purchased by permitted dealers or brokers from U.S. vessels since the 1960's.

For each species purchased, dealers are to provide information on the fisherman, vessel, trip data (start, end, etc.), and gears used, and the unit of measure, quantity, market information, and price paid for the species. Current regulations require that this data be electronically submitted on a daily basis to NERO. Since trip information is collected for each product, whatever trip data that is not collected from the dealers can conceivably be retrieved by cross-referencing SAFIS data to the Northeast's vessel database, Vessel Trip Report (VTR), which contains data since 1994. A unique aspect of the SAFIS database is that most state agencies in the northeast, rather than maintaining a separate data collection program, now attain their data by downloading information submitted by dealers in their state from SAFIS.

Two problems have been identified while working with shark purchases within this data set. Although the state of North Carolina is considered to be part of the Southeast region, many of the dealers in North Carolina have permits issued by the NERO and handle species that are included in fishery management plans promulgated for the Northeast Region. Consequently, the fisheries for these species are under the jurisdiction of the NERO. As a result, some dealers in North Carolina have a dealer permit to handle highly migratory species and a northeast fishery permit. These dealers, therefore, are required to report all species purchased to NERO, as well as all HMS products to the SEFSC. Due to the duplicate nature of these reporting requirements, inconsistent shark reporting have been observed from North Carolina dealers (i.e., duplicate reports, reporting to one NMFS office and not the other). This problem should be eliminated, however, when the changes to Part 648 go into effect (a PDF may be found at <http://www.nero.noaa.gov/nero/regs/com.html#March> under the heading "Regulatory Amendment to Modify Seafood Dealer Reporting Requirements" in March 2005). The second inconsistency observed in the Northeast shark dealer data is encountered when a northeast dealer purchases shark products landed in the Southeast Region. Although these landings are expected to be in the Northeast database (either SAFIS or the archived Dealer Weigh-Out data), they have sometimes been omitted because they are considered a 'Southeast' landing. Therefore, some landings (a small percentage, to the extent of our knowledge) may not be accounted for in the databases from either region.

Data column names provided in the extracted report are listed in Appendix A. The name and contact information for the data manager is listed in Appendix B.

Appendix A - Data Set NamesPelagic Dealer Compliance

BATCH_YEAR	NMFS_SPECIES_CODE
SCHEDULE	SIZE_CODE
SE_PERMIT_NUMBER	DRESSED_WEIGHT
NE_PERMIT_NUMBER	PRICE_PER_POUND
ALPHA_STATE	VALUE
NMFS_STATE_CODE	DATE_LANDED
BEGIN_DATE	VESSEL_NAME
END_DATE	VESSEL_ID
FISH_PURCHASED	PORT_LANDED
WEIGH_OUT	STATE_LANDED

General Canvass Data

MONTH	SHELL
YEAR	POUNDS
STATE	VALUE
CNTY	SECT
DEALER	PRICE
WATER	DIST
GEAR	CAUGH
SPECIES	NAME

SAFIS

(Data fields provided from an extracted report)

COMMON NAME
 SPECIES_ITIS
 GROUP
 YEAR
 MONTH
 STATEABB
 GEAR_GROUP
 DEALER
 DRESSED_POUNDS_Sum

Appendix B - Contact Information

Name	Location	Phone Number	Email Address	Database
Heather Balchowsky	SEFSC, Miami, Florida	(305) 361-4239	Heather.balchowsky@noaa.gov	Data manager for SE quota monitoring data (PDC)
Mike Cahall	ACCSP, Washington, DC	(202).216-5690	mcahall@asmfc.org	Program designer and manager for SAFIS
Joan Palmer	NMFS, Woods Hole, Massachusetts	(508)495-2247	joan.palmer@noaa.gov	Data manager for NE archived dealer weigh out database and the Commercial Fisheries Database System
David Gloeckner	SEFSC, Beaufort Laboratory, Beaufort, North Carolina	(252) 728-7821	David.Gloeckner@noaa.gov	Data manager for the general canvass data (North Carolina, South Carolina, and Georgia)
Charlie Schaefer	NMFS, Tequesta Field Office, Tequesta, Florida	(561) 575-4461	Charles.Schaefer@noaa.gov	Data manager for the general canvass data (Florida)
Josh Bennett	SEFSC, Miami, Florida	(305) 361-4485	Joshua.Bennett@noaa.gov	Data manager for the general canvass data (Alabama, Mississippi, Louisiana, Texas, Puerto Rico, and U.S. Virgin Islands)