7. FISH PROCESSING, INDUSTRY, AND TRADE

Over the past several years, the United States has taken steps to use international trade information to further U.S. conservation policy related to Atlantic HMS. While these steps may seem small and the process slow, it is important to note that by working multi-laterally, management actions taken by the United States are strengthened and provide protection from a challenge in World Court. U.S. actions related to trade must be consistent not just with domestic fisheries legislation, but also with the General Agreements of Tariffs and Trade (GATT).

Because there are "missing links" surrounding the harvest, processing, and trade of Atlantic HMS, NMFS cannot re-create information about stock production based on trade data. Nevertheless, trade data is used to update information on international and domestic activities related to these fisheries and to question compliance with ICCAT management measures. Sharks are not included in ICCAT recommendations, however, in December 2000, a bill was signed that requires the Secretary of Commerce to ban shark finning in the United States and to begin discussions on developing agreements to prohibit shark finning internationally. Section 7.1 reviews species-specific U.S. trade information collected in 2001. Section 7.2 provides information about the use of trade data for conservation purposes.

7.1 Overview of U.S. Trade Activities for HMS

Processing

The processing and trade-related entities that depend on Atlantic HMS are as diverse as the species and products themselves. Processing ranges from the simple process of dressing and icing swordfish at sea, to elaborate grading and processing schemes for bluefin tuna, to processing shark fins. Like all other seafood, HMS are perishable and may pose health hazards if not handled properly. Products range from those having a long shelf-life, such as swordfish, to highly perishable species like yellowfin tuna. Improperly handled yellowfin can produce histamine, swordfish and sharks may contain high levels of mercury, and shark meat requires careful handling due to the high concentrations of urea in the body of the shark. Processing companies are aware of these characteristics and their costs of doing business vary accordingly to protect consumers. The Food and Drug Administration (FDA) works closely with NOAA Office for Law Enforcement to monitor incoming shipments of seafood, including highly migratory species.

FDA's Seafood Hazard Analysis Critical Control Point (HACCP) program regulations require processors of fish and fishery products to operate preventive control systems for human food safety. Among other things, processors must effectively maintain the safety of their products, systematically monitor the operation of critical control points to ensure that they are

working as they should, and keep records of the results of that monitoring. Processors must also develop written HACCP plans that describe the details and operation of their HACCP systems. Each processor may tailor its HACCP system to meet its own circumstances. The best way for FDA to determine whether a processor is effectively operating a HACCP system is by inspecting the processor to assess whether the system is operating properly and is appropriate for the circumstances. Review of monitoring and other records generated by the HACCP system is a critical component of an inspection because it allows the inspector to match records against practices and conditions being observed in the plant and it discourages fraud. NMFS works closely with the FDA, in support of the HACCP program.

Just as HACCP plans vary between processors, transportation of the seafood to market also varies widely from the direct domestic sale of some shark or swordfish meat by a fisherman to a restaurant (carried by truck) to the quick, and sometimes complicated, export of bluefin tuna from fisherman to dealer to broker to the Japanese auction (carried by commercial airline carrier). Frozen swordfish and tunas are often brought to the United States by overseas shipping companies and sharks and other products may be exported from the United States, processed overseas, and imported in a final product form.

It is unknown how many U.S. companies depend on HMS fisheries, other than those who buy fish directly from U.S. fishermen and those who import bluefin tuna or swordfish. The proportion of those companies that depend solely on Atlantic HMS versus those that handle other seafood and/or products is also unknown. This section provides a summary of the most recent trade data NMFS has analyzed, as well as a brief description of the processing and trade industries employed in transitioning Atlantic HMS from the ocean to the plate.

Processing and Wholesale Sectors

Quantitatively, NMFS has limited information on the processing sector, i.e., the amount of HMS products sold in processed forms. In addition, knowledge regarding the utilization of Atlantic HMS is largely limited to the major product forms. For example, bluefin tuna are usually shipped and sold in dressed form at fish auctions in Japan. Information on the processing sector of the Atlantic bluefin tuna fishery is detailed in the HMS FMP (Section 2.2.4.1). Other Atlantic tunas, especially bigeye tuna, are frequently shipped fresh to Japan in dressed form. Swordfish are sold fresh and frozen in dressed form and processed products (e.g., steaks and fillets). The utilization of sharks is also not well known since trade statistics frequently do not indicate product forms such as skins and leather, jaws, fishmeal and fertilizer, liver oil, and cartilage (Rose, 1996). Domestically-landed sandbar and blacktip shark meat may be sold to supermarkets and processors of frozen fish products. NMFS continues to work with industry to collect information specific to U.S. and foreign processing of Atlantic HMS to better track markets, conserve stocks, and manage sustainable fisheries.

The U.S. processing and wholesale sectors are dependent on both the U.S. and international HMS fisheries. Individuals involved in these businesses buy the seafood, cut it into pieces that transform it into a consumer product, and then sell it to restaurants or grocery store chains. Employment varies widely among processing firms and may be seasonal unless the firm relies on imported seafood or a wide range of domestic seafood. The majority of firms handle other types of seafood and are not solely dependent on HMS. Other participants in the commercial trade sector include brokers, freight forwarders, and carriers (primarily commercial airlines, trucking, and shipping companies). Swordfish, tunas, and sharks are important commodities on world markets, generating significant amounts in export earnings in recent years. NMFS has received comments in the past year indicating the social demographics of some processing firms, particularly in South Carolina and Louisiana. NMFS considers social information on all sectors of HMS constituents when evaluating impacts of proposed regulations.

In recent years, NMFS has observed many seafood dealers that buy and sell highly migratory species and other seafood products expand their operations into Internet-powered trading platforms specifically designed to meet the needs of other seafood professionals. Through these platforms, interested parties can conduct very detailed negotiations with many trading partners simultaneously. Buyers and sellers can bargain over all relevant elements of a market transaction (not just price) and they can specify the product needed to buy or sell in all detail, using seafood- specific terminology. The platforms are purportedly very easy to use because they mimic the pattern of traditional negotiations in the seafood industry. NMFS expects that the use of the Internet will change the way HMS trade occurs substantially in the future and NMFS staff continue to learn about new technologies being used by our constituents.

Monitoring International Trade of HMS

Understanding the harvesting and processing sectors is essential when analyzing world trade in highly migratory fish species. Trade data for Atlantic HMS are of limited use as a conservation tool unless they indicate the flag of the harvesting vessel, the ocean of origin, and the particular species landed. Under the authority of the Atlantic Tunas Convention Act and the Magnuson-Stevens Act, NMFS collects this information while monitoring international trade of bluefin tuna and swordfish. The bluefin tuna and swordfish monitoring programs (and upcoming bigeye tuna program) implement ICCAT recommendations and support rebuilding efforts by collecting data necessary to identify nations and individuals that may be fishing in a manner that diminishes the effectiveness of ICCAT fishery conservation and management measures. Copies of all documents may be found on the HMS webpage at www.nmfs.noaa.gov/sfa/hmspg.html.

Bluefin Tuna Statistical Document

Of the Atlantic HMS, the international trade of bluefin tuna is perhaps the best tracked due to international adoption of an ICCAT recommendation to implement the Bluefin Statistical

Document (BSD) program. This process is bolstered by Japan's support for the program as a major importer of bluefin tuna. Each bluefin tuna is tagged and documented and the BSD travels with each shipment until the final point of destination. This document tracks *imports* and *exports* of bluefin tuna by most ICCAT nations. If bluefin tuna are exported from, or imported to, the United States, the document is submitted to NMFS as part of the monitoring program.

Yellowfin Tuna Form 370

Since the late 1970's, NOAA Form 370 has been used to document imports of yellowfin tuna and other species of tuna for the purposes of protecting dolphins in the eastern tropical Pacific Ocean. Form 370 is filed with other documents necessary for entry into the United States and is then forwarded to NMFS's Southwest Regional Office. The form is *not* required for fresh tuna, animal food, or canned petfood made from tuna.

Swordfish Certificate of Eligibility

The United States also monitors the trade of swordfish, but only as it relates to the sale of Atlantic swordfish in U.S. markets. Monitoring U.S. imports of swordfish is facilitated by the use of U.S. Customs data, the Certificate of Eligibility (COE), and importer activity reports. The U.S. COE program was established to implement an ICCAT recommendation that allows countries to ban the sale of swordfish less than the minimize size. The United States is successfully monitoring swordfish imports through this program and is providing useful information on Atlantic swordfishing activities to ICCAT. If swordfish shipments enter the United States under the swordfish tariff codes required by U.S. Customs regulations, the shipments can be cross-checked with a COE that indicates the flag of the harvesting vessel and the ocean of origin. Furthermore, the COE validates that the imported swordfish were not less than the U.S. minimum size of 33 lb dressed weight. In order to implement a 1999 ICCAT recommendation to prohibit the import of swordfish harvested by Belize and Honduras, Japan implemented a swordfish monitoring program in 2000 that is similar to the U.S. COE program. In addition, at its 2000 meeting, ICCAT agreed to develop international statistical document programs for Atlantic swordfish and bigeye tuna. In July 2001, the United States hosted an ICCAT Technical Workshop.

Billfish Certificate of Eligibility

A Certificate of Eligibility is used to document that any billfish being imported or sold in the United States outside of Pacific states is not of Atlantic origin. In the Pacific states, billfish involved in trade are presumed to be of Pacific origin. There is not a specified document, although NMFS developed a document that can be used. Any statement that contains the specified information is sufficient to meet the documentation requirements.

Future Plans

At its 2000 meeting, ICCAT adopted a recommendation to develop statistical document programs for swordfish and bigeye tuna, modeled in principle on the BSD program. The new programs will monitor trade in these species and assist in the collection of data. Data collected by the programs will improve scientific stock assessments and enhance the ability of ICCAT to develop effective conservation measures, such as identifying and imposing trade sanctions on nations involved in illegal, unregulated, and unreported fishing activities. A meeting of technical experts was hosted by the United States in July 2001 to resolve issues relating to the implementation of the programs. The technical experts meeting forwarded a report to the Commission that included specific draft Recommendations and forms for consideration at the 2001 Commission meeting. These Recommendations and forms were adopted, with some modifications, at the 2001 Commission meeting, and implementation of the programs is expected to begin in late 2002 and early 2003. As a result of the recently passed shark finning bill, the Secretary of Commerce is required to annually provide Congress with a list of nations whose vessels conduct shark finning including estimates of harvest and value of fins, and recommendations to ensure U.S. actions are consistent with international obligations.

7.1.1 Exports

Existing programs at NMFS monitor exports of fish products and makes Bureau of the Census data available online to the public at www.st.nmfs.gov/st1/trade/index. NMFS also collects detailed export data on Atlantic bluefin tuna, all of which are accompanied by a bluefin statistical document. “Exports” may include merchandise of both domestic and foreign origin. Census defines exports of "domestic" merchandise to include commodities which are grown, produced, or manufactured in the United States (e.g., fish caught by U.S. fishermen). For statistical purposes, domestic exports also include commodities of foreign origin which have been altered in the United States from the form in which they were imported, or which have been enhanced in value by further manufacture in the United States. The value of an export is the f.a.s. (free alongside ship) value defined as the value at the port of export based on a transaction price including inland freight, insurance, and other charges incurred in placing the merchandise alongside the carrier. It excludes the cost of loading the merchandise, freight, insurance, and other charges or transportation costs beyond the port of exportation.

Bluefin Tuna Exports

Table 7.1 indicates levels of bluefin tuna exports from the United States. Decreases in Atlantic BFT exports reflect the growing U.S. market for high-quality fresh bluefin tuna meat and the weakened Japanese yen.

Table 7.1 **United States Exports (mt dw) of Bluefin Tuna (Atlantic and Pacific). As reported through the Bluefin Tuna Statistical Document Program, 1996 - 2000.** U.S. BSD Program, NMFS NERO.

	Commercial Landings of Atlantic BFT	Exports of Atlantic BFT	Exports of Pacific BFT	Total U.S. Exports of BFT
1996	749.8	661.7	60.7	722.4
1997	826.8	698.7	917.3	1,616.0
1998	849.1	658.6	694.2	1,352.7
1999	876.0	733.9	95.7	1,036.8
2000	903.9	758.0	75.6	833.6

Note: most exports of pacific BFT were in round (whole) form, although some exports were of dressed and gilled/gutted fish

Information on exports of bluefin tuna for the first half (January through June) of 2001 is also available. Preliminary data indicate that 12.0 mt of west Atlantic bluefin tuna, and 0.6 mt of Pacific bluefin tuna were exported from the United States during this time period. These figures are lower than in 2000 in the same time period possibly due to lower catches of BFT by U.S. harpoon fishermen, whose season began June 1, 2001. It should be noted, however, that most landings (and exports) of bluefin tuna in the United States occur during the second half of the calendar year.

Shark Exports

NMFS also collects trade data on the export of sharks, although not in the level of detail found in the BSD program. Shark bycatch information is submitted to ICCAT and to the Food and Agriculture Organization (FAO), but no regional fishery management organization exercises management authority over Atlantic shark species as yet. Other regional entities, including the FAO, work to conserve sharks worldwide and gather trade information on shark species. Shark exports are not identified by species code with the exception of dogfish. In addition, they are not identified by specific product code other than fresh or frozen meat and fins. Shark shipments are not identified with respect to the flag of the harvesting vessel or the ocean of origin. Due to the

popular trade in shark fins and their high relative value compared to shark meat, shark fins are tracked as a specific product code by U.S. Customs. In 1998, exported shark fins averaged $8.54/kg ($8.95/kg in 1998). In that same year, exported fresh and frozen shark meat averaged $1.80 and $2.97/kg, respectively. Table 7.2 indicates the magnitude of shark exports by the United States from 1995-1999. Sharks are targeted in the coastal Pacific Ocean by the driftnet thresher fishery and are caught incidental to the Bering groundfish (trawl) and tuna and swordfish longline fisheries in the Western Pacific Ocean. However, the Atlantic fishery catches a large number of sandbar and blacktip sharks which are thought to be sold domestically. As a result, it is unknown what percentage of total exports can be attributed to the Atlantic fishery.

Table 7.2 1996-2000 U.S. Exports of Shark Products (kg). Bureau of Census data.

Year	Shark Fins Dried (kg, US$)*		Non-specified Fresh Shark (kg, US$)		Non-specified Frozen Shark (kg, US$)		Total for all Products (kg, US$)	
1996	NA	NA	640,677	1,342,273	358,000	969,955	998,677	2,312,228
1997	NA	NA	459,542	920,887	439,992	884,588	899,534	1,805,475
1998	141,149	1,264,077	524,249	814,319	102,939	250,107	768,337	2,328,503
1999	106,723	911,671	270,343	487,610	155,275	461,362	532,341	1,860,643
2000	365,146	3,512,863	430,725	784,704	345,942	814,456	1,141,813	5,112,023

* There was no product code for the export of shark fins prior to 1998. Therefore, any exported shark fins may have been identified as unspecified shark product or as unspecified dried fish.

Note that all export categories of shark increased substantially in 2000 over 1999 values. The weight of exported shark fins in 2000 was over three times that which was exported in 1999. The average price quoted for exports of fresh shark remained relatively constant from 1999-2000 ($1.82/kg in 2000), but decreased slightly for frozen product ($2.35/kg in 2000). Shark fin exports increased substantially; shark meat products also increased, albeit by a lesser proportion. This trend was apparently not affected by state restrictions in the Pacific or Federal regulations in the Atlantic Ocean which bans the practice of finning and requires fishermen to land weight of fins no more than 10 percent of shark meat landed. In 2000, the weight of exported fins was approximately 50% of the weight of landed shark meat (assuming fresh and frozen shark product is meat and not skins, etc). In 1999, fins were approximately 25% by weight of the meat landed. The average price for exported shark fins was $9.62/kg in 2000, up slightly from the 1999 average price.

It should be noted that there is no tracking of other shark products besides meat and fins. Therefore, NMFS cannot track trade in shark leather, oil, or shark cartilage products. Additionally, the United States has reported its imports of shark fins since 1964 but has only

recently obtained a tariff code for exporting shark fins. Until that time, they were classified under a general heading.

Consistent with the directives of Section 5 of the Shark Finning Prohibition Act, the Department of Commerce and the Department of State have initiated an ongoing consultation regarding the development of international agreements consistent with the Act. Discussions have focused on possible bilateral, multilateral and regional agreements with other nations. The law calls for us to pursue an international ban on shark finning, but also to push for improved data collection (including biological data, stock abundance and bycatch levels, and information on the nature and extent of shark finning and trade). Determining the nature and extent of shark finning is the first step toward reaching agreements that will decrease the incidence of finning worldwide.

Summary of Atlantic HMS Exports

In 1999, the United States exported 907,190 mt of edible fishery products worth $2.8 billion. Fresh and frozen items (non-canned) were 725,760 mt, valued at $2.2 billion. Atlantic HMS exports are dominated by bluefin tuna and sharks. According to the *Fisheries of the United States, 2000*, 1,437 mt ww of bluefin tuna were landed in the United States in 2000 from all oceans. This represents a 20 percent increase from the previous year, but is still less than half of the annual average for 1995-1999. This decrease is due to lower landings of Pacific bluefin, as landings of Atlantic bluefin have remained relatively stable. Comparing total 2000 U.S. landings of bluefin with data from U.S. BSD program, after applying a 1.25 multiplier to Atlantic exports to estimate ww (most Pacific exports were already in whole form), it appears that roughly 72 percent of bluefin tuna landed in the Unites States were exported. For Atlantic bluefin tuna only, about 84 percent of landings were exported, which is consistent with recent levels.

The nature of reporting on sharks, particularly distinctions between fins and whole fish, makes comparison too difficult. However, overseas markets provide a profitable outlet for many U.S. Atlantic HMS fishermen and may provide superior markets compared with those found in the United States.

7.1.2 Imports

All seafood import shipments are required to be accompanied by a 7501 Customs entry form. The information submitted on this form is analyzed by NMFS and those data are available online at www.st.nmfs.gov/st1/trade/index. As mentioned on the web page, two methods are used to track imports: "general" imports are reported when a commodity enters the country, and "consumption" imports consist of entries into the United States for immediate consumption combined with withdrawals from Customs bonded warehouses. “Consumption” import data reflect the actual entry of commodities originating outside the United States into U.S. channels of

consumption. These are the data used by NMFS. Additional detailed information is collected by NMFS on bluefin tuna and swordfish imports and is discussed in further depth below. For both bluefin tuna and swordfish imports, NMFS accesses multiple sources of data and can therefore cross-check reports to ensure compliance with reporting requirements. For example, if a swordfish shipment enters the United States, NMFS receives general data about that shipment (exporting country, date of entry, weight of shipment, general product form) on the entry form. NMFS could then ensure that an importer activity report had been submitted detailing prices and specific product forms. NMFS could also check for a Certificate of Eligibility accompanying the shipment to indicate the flag of the harvesting vessel (sometimes different from exporting country), ocean of origin, and verification that, if it was an Atlantic swordfish, it weighed more than 33 lbs dressed weight when harvested.

Bluefin Tuna Imports

Importers of bluefin tuna are required to obtain an annual tuna dealer permit and to report through the BSD program. Since 1997, NMFS has received U.S. Customs data (derived from Entry Form 7501) on imports of fresh and frozen bluefin tuna and swordfish on a monthly basis. These data allow NMFS to track shipments of bluefin tuna and enforce dealer reporting requirements. United States imports and re-exports of bluefin tuna for 1996 through 2000, as reported through both U.S. Customs and the BSD program, are shown in Table 7.3. The difference in import numbers between the U.S. Customs and BSD data may be explained by a lack of knowledge and compliance with the BSD program by importers, especially those on the Pacific coast. As awareness of the BSD program has improved among importers, the gap between imports reported through the BSD program and Customs has narrowed, largely due to efforts by NMFS in the Northeast Regional Office.

In general, industry sources report that imports of bluefin tuna into the United States are on the rise as the international value of the dollar remains high relative to other currencies. The recent rise in the popularity of raw tuna in the United States has also prompted increasing imports of bluefin tuna and dealers are reporting an expanded domestic market for both locally-caught and imported raw tuna. Improvements in BSD compliance combined with the growing U.S. popularity of bluefin tuna are primarily responsible for the large differences between 1997 and 2000 imports shown in Table 7.3.

Table 7.3 **Imports of Bluefin Tuna into the United States**. As reported through the BSD program and U.S. Customs, 1996 - 2000, in metric tons.

	U.S. BSD Program		
	Imports	**Re-exports**	
1996	1.9	1.3	N/A

1997	5.3	0.4	109.5
1998	99.9	1.9	225.6
1999	367.0	11.1	558.6
2000	417.6	32.8	453.4

Note: most imports BFT were in dressed form, although some imports were of round and gilled/gutted fish. There were also some imports of BFT fillets and belly meat.

Information on imports and re-exports of bluefin tuna for the first half (January through June) of 2001 is also available through the BSD program. Preliminary data indicate that 302.2 mt were imported into the United States, and an additional 5.7 mt were re-exported during this period.

Bigeye Tuna Imports

As mentioned above, ICCAT adopted a recommendation at its 2001 meeting to implement a statistical document program for bigeye tuna. ICCAT members are required to implement the bigeye statistical document program by July 1, 2002, or as soon as possible thereafter. Similar to when the bluefin statistical program was first implemented, the bigeye statistical document will only be required to accompany shipments of frozen bigeye. The statistical document program will likely be expanded to fresh bigeye at some later date.

Since January 2001, the U.S. Customs Service has been collecting species specific import information for bigeye tuna. Previously, bigeye tuna had been included under general tuna imports. From January through September 2001, the United States imported 3,438 mt of bigeye tuna, over 98 percent of which was fresh product. The leading exporting countries were Trinidad and Tobago, Brazil, and Costa Rica, together accounting for over 66 percent of U.S. imports.

Swordfish Imports

Since the United States is a dominant swordfish market and demand for swordfish may provide incentive for nations to export Atlantic swordfish to the United States, NMFS reports imports of swordfish to ICCAT every year in November as part of the U.S. National Report. Data are collected from Customs entry forms, certificates of eligibility, and U.S. importer activity reports. Table 7.4 summarizes the bi-weekly dealer report and the COE data for the 2000 calendar year.

Table 7.4 Swordfish import data collected under the Swordfish Import Monitoring Program (mt dw) for the 2000 calendar year.

	Ocean of Origin			
Flag of Harvesting Vessel	**Atlantic**	**Pacific**	**Indian**	**Total**
Australia	0.00	220.71	27.00	247.71
Barbados	5.58	0.00	0.00	5.58
Brazil	1,287.04	1.76	0.00	1288.81
Canada	240.48	0.00	0.00	240.48
Chile	0.00	771.16	0.00	771.16
Costa Rica	0.00	319.34	0.00	319.34
Dutch Antilles	0.00	0.00	0.00	0.00
Ecuador	0.03	230.63	0.00	230.67
El Salvador	0.00	38.28	0.00	38.28
Fiji Islands	0.00	49.13	0.00	49.13
Grenada	28.94	0.00	0.00	28.94
Indonesia	0.00	0.00	41.83	41.83
Japan	0.00	116.47	32.59	149.06
Mexico	0.00	284.76	0.00	284.76
Namibia	18.44	0.00	0.00	18.44
New Zealand	0.00	217.65	0.00	217.65
Panama	0.71	1.16	0.00	1.87
Peru	0.00	0.00	0.00	0.00
Philippines	18.24	14.16	0.00	32.40
Samoa	0.00	2.13	0.00	2.13
Singapore	0.00	0.00	0.00	0.00
South Africa	535.73	0.00	1.97	537.70
St. Vincent	15.04	0.00	0.00	15.04
Taiwan	245.05	28.56	3,249.14	3522.75
Trinidad & Tobago	15.54	0.00	0.00	15.54
United States	2.02	0.00	0.00	2.02
Uruguay	187.95	0.00	0.00	187.95
Venezuela	11.36	0.00	0.00	11.36
Vietnam	0.00	33.69	0.00	33.69
Not Provided	0.00	0.00	1.69	
TOTAL	2,612.15	2,329.59	3,354.22	8295.96
% of total swordfish imports	31.00	28.00	40.00	

It should be noted that implementation of such a broad monitoring program such as the swordfish Certificate of Eligibility program takes time. This program has been in place since June 1999.

Table 7.5 Swordfish Products imported: 1995-2000. Bureau of Census data.

Year	Frozen (kg)			Fresh (kg)			
	Fillets	**Steaks**	**Other**	**Steaks**	**Other**	**kg**	
1996			404,118		4,735,478	5,139,596	32,948,992

1997	6,872,850	129,935	117,983	282,106	8,195,182	15,598,056	95,423,460
1998	7,224,329	207,816	259,675	92,560	8,497,451	16,281,831	82,577,668
1999	4,377,159	401,870	386,865	81,233	8,595,843	13,842,970	71,700,000
2000	4,833,867	524,148	167,441	161,763	8,626,856	14,314,075	85,579,449

note: Prior to 1997, Customs codes specific to products beyond the frozen and fresh designations, did not exist.

Recent reports indicated that swordfish and shark, as well as some other large predatory fish, may contain methyl mercury levels in excess of the Food and Drug Administration's one part per million (ppm) limit which may decrease demand by the public. FDA scientists responsible for seafood safety are also concerned about the safety of the eating these types of fish, but they agree that the fish are safe, provided they are eaten infrequently (no more than once a week) as part of a balanced diet. In January 2001, the FDA changed its consumer guidance to women who are or may become pregnant recommending they avoid consuming swordfish or shark. Previous guidance recommended limiting consumption of these fish to once per month. The FDA refuses entry to any tested swordfish that exceeds FDA standards for mercury. For more information about seafood safety, refer to the FDA homepage at http://vm.cfsan.fda.gov/~dms/mercury.html.

On March 15, 2001 a bill was introduced into the Senate entitled “Mercury-Safe Seafood Act of 2001". The bill would lower the tolerance for mercury in seafood potentially as low as 0.2 ppm. If such a bill were signed into law, implementing regulations could be very costly to the seafood industry. That bill has been referred to committee and has not progressed through the legislative system.

Shark Imports

The United States imports both fresh and frozen shark meat. These imports and shark fins can be tracked using data from the Customs 7501 entry form. NMFS does not require importers to submit additional data regarding shark shipments. These meat products are reported to be high-quality and are supplied to restaurants and other seafood dealers that import other high-quality seafood products (Rose, 1996). NMFS does not have specific product information on imported shark meat such as the proportion of fillets, steaks, or loins. NMFS also has no data on imports of the condition of shark fins; i.e., wet, dried, or further processed products such as canned shark fin soup. The United States may be an important trans-shipment port for shark fins; shark fins may be imported wet and then exported dried. It is also probable that U.S.-caught shark fins are exported to Hong Kong or Singapore for processing, then imported back into the United States for consumption by urban-dwelling Chinese Americans (Rose, 1996). There is no longer a separate tariff code for shark leather, making it impossible to track imports of shark leather through analysis data from the Customs 7501 entry form. Imports of frozen sharks have

more than tripled since 1995 while imports of shark fins have decreased by approximately 50 percent (by weight) (Table 7.6).

Table 7.6 **1996-2000 U.S. Imports of Shark Products**. Bureau of Census data

Year	Shark Fins Dried		Non-specified Fresh Shark		Non-specified Frozen Shark		Total For All Products	
	kg	US$	kg	US$	kg	US$	kg	US$
1996	60,407	2,270,261	1,330,688	3,618,205	21,244	489,442	1,412,339	6,377,908
1997	77,626	3,060,438	1,191,044	3,044,984	59,641	914,783	1,328,278	7,020,205
1998	62,169	1,698,646	947,545	2,160,985	148,167	1,125,994	1,157,881	4,985,625
1999	59,872	2,104,846	1,095,119	2,038,016	105,398	621,499	1,260,389	4,764,361
2000	66,107	2,355,575	1,066,144	1,859,203	90,166	575,226	1,222,417	4,790,004

In 2000, imported shark fins averaged $35/kg while fresh shark averaged $1.74/kg, and frozen shark product averaged $6.37. These prices are consistent with the previous year's data. The Shark Finning Prohibition Act was not passed until December of 2000, therefore, decreases in shark fin trade is not expected until 2001.

Summary of Imported HMS

Atlantic swordfish is an important U.S. import. According to the *Fisheries of the United States, 1999*, approximately $33.4 million of swordfish was landed commercially from all oceans by U.S. fishermen in 1999 (7,267 mt or $2.08/lb). In contrast, $71.7 million (13,814 mt or $2.35/lb) of swordfish was imported. U.S. consumer preference continues to be a driving force for the world's swordfish fisheries and level of demand will no doubt play a role in future harvesting strategies. As Atlantic swordfish quotas decrease over the next few years to support rebuilding efforts, swordfish from the Pacific and Indian Oceans will continue to supply the U.S. market. Tunas are also imported in great quantity, although it is difficult to identify the source and species of processed tuna products. Bluefin tuna are frequently imported into the United States for transshipment to Japan, the dominant market for high-quality bluefin. However,

tracking systems like the U.S. BSD program assist in providing NMFS with information on tuna trade.

Imports of shark products overall slightly exceed exports, however, the value of exports is higher. The United States imports twice the amount of exports of fresh shark, but exports almost four times the amount of frozen product that is imported. Exports of shark fins are five times the weight of imported fins. Prices of imported shark fin products averaged $35/kg while exported fins averaged only $9.62/kg. In 2000, a minor amount of shark fins were re-exported from the United States (404 kg). A minor amount of frozen shark product was also re-exported (18,184 kg). In the past small amounts of both fins and frozen shark have been re-exported.

7.2 The Use of Trade Data for Conservation Purposes

When appropriate, the SCRS uses trade data on bluefin tuna, swordfish, bigeye tuna, and yellowfin tuna that are submitted to ICCAT as an indication of increased landings. These data can then be used to augment estimates of fishing mortality rates (F) of these species, which improves scientific stock assessments. In addition, these data are used to assist in assessing compliance with ICCAT recommendations and identify those countries whose fishing practices diminish the effectiveness of ICCAT conservation and management measures. ICCAT has adopted a recommendations to address the lack of compliance with quotas in the bluefin tuna and north and south Atlantic swordfish fisheries by ICCAT members. Penalties for members that are not in compliance may include catch limit reductions and, if necessary, trade restrictive measures.

An analysis of vessel sighting and Japanese BSD data led to the determination that Panama, Honduras, and Belize were fishing in a manner that diminished the effectiveness of the bluefin tuna rebuilding program. On August 21, 1997, NMFS implemented a 1996 ICCAT recommendation to prohibit the importation of Atlantic bluefin tuna and its products from Panama, Honduras, and Belize (62 FR 44422). Since that time, ICCAT has continued to communicate with these nations in an attempt to encourage compliance with ICCAT measures. In 1999, ICCAT recommended that the trade restrictions on Panama be lifted as a result of the Government of Panama's recent efforts to substantially reduce fishing vessel activities deemed inconsistent with ICCAT measures. Honduras and Belize continue to have vessels that fish in a manner that diminishes the effectiveness of ICCAT's conservation and management measures.

In 1999, ICCAT also identified Equatorial Guinea, an ICCAT member, as a country whose vessels were fishing in a manner that diminishes the effectiveness of ICCAT conservation and management measures for Atlantic bluefin tuna. Import data from 1997-1999 reveal significant exports of Atlantic bluefin tuna by Equatorial Guinea despite the fact that the country had a zero catch limit during that time period. The Government of Equatorial Guinea has not responded to ICCAT inquiries and has reported no bluefin tuna catch data to ICCAT. As a result, ICCAT recommended trade restrictions as a penalty for non-compliance. Therefore, consistent

with the 1999 ICCAT recommendation, NMFS prohibited the importation of Atlantic bluefin tuna and its products from Equatorial Guinea.

In 2000, NMFS prohibited the importation of bluefin tuna from Equatorial Guinea and swordfish from Belize and Honduras, consistent with 1999 recommendations from the International Commission for the Conservation of Atlantic Tunas (ICCAT). NMFS also removed a prohibition on the importation of Atlantic bluefin tuna from Panama. NMFS also proposed in 2001 (November 15, 2001; 66 FR 57409), to prohibit the importation of Atlantic bigeye tuna from Belize, Honduras (delayed effective date), Equatorial Guinea, Cambodia, and St. Vincent and the Grenadines, consistent with a 2000 ICCAT recommendation. Data obtained by monitoring international trade in highly migratory species was instrumental in making the decision at ICCAT to impose trade restrictions. The role of trade data in assisting in the identification of problem fishing will likely increase in importance in the future.

7.3 Conclusions and Future Plans

NMFS recognizes the limitations of using trade data to monitor conservation and management of HMS, particularly to identify IUU vessels operating in the ICCAT management areas. However, NMFS has been successful at using these tools to collect more information about fisheries, harvesting practices, markets, and processors related to these species. Improved data collection depends on all harvesting nations and their ability and willingness to monitor fisheries and submit complete data sets to regional and global organizations such as FAO. These nations could potentially be assisted by the development of guidelines or standards for monitoring trade.

NMFS monitors trends in trade for all federally managed species and will identify any need for additional harmonized tariff codes. While a request of the International Trade Commission for an additional tariff code is not always fulfilled, NMFS has been successful in the past to solicit a code for shark fins, and specific product codes for swordfish (e.g., fillets and steaks). The use of more detailed bluefin and swordfish trade data has recently proved to be an effective tool for monitoring international activities. Combined with vessel sighting information, these data provide clues about illegal, unreported, and unregulated fishing activities on the high seas. NMFS expects that ICCAT will increase its use trade data in its efforts to monitor, assess, and control fishing activities and to conserve the international resources under its authority.

Section 7 References

Rose, D. 1996. An Overview of World Trade in Sharks. TRAFFIC International. 105 pp.