7. FISH PROCESSING, INDUSTRY, AND TRADE

Over the past several years, the United States has taken steps to use international trade information to further domestic conservation policy related to Atlantic HMS. While this process is 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 before the World Trade Organization. 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 capture, processing, and trade of Atlantic HMS, NOAA Fisheries 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 required the Secretary of Commerce to ban shark finning in the United States and to begin discussions on developing international agreements to prohibit shark finning. Section 7.1 reviews species-specific U.S. trade information collected in the past year. 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 techniques range from the simple dressing and icing of 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 tuna 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 of Law Enforcement to monitor incoming shipments of seafood, including highly migratory species.

FDA's Seafood Hazard Analysis Critical Control Point (HACCP) program implemented regulations that require processors of fish and fishery products to operate preventive control systems to ensure 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. Federal 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 the practices and conditions being observed in the plant and it discourages fraud. NOAA Fisheries 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 a 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 that NOAA Fisheries 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, NOAA Fisheries 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 as 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. NOAA Fisheries 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 upon both 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 retail outlets. Employment varies widely among processing firms. Often employment is seasonal unless the firms also process 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.

NOAA Fisheries has recently 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 can specify the product needed to buy or sell in 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. NOAA Fisheries expects that the use of the internet will change the way HMS trade occurs in the future. NOAA Fisheries staff intends to continue to learn about the 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, NOAA Fisheries 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 NOAA Fisheries 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 purpose 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 NOAA Fisheries'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 is not less than the U.S. minimum size of 33 lb dressed weight. Japan implemented a swordfish monitoring program in 2000 that is similar to the U.S. COE program in order to implement a 1999 ICCAT recommendation to prohibit the import of swordfish harvested by Belize and Honduras. In addition, at its 2000 meeting, ICCAT agreed to develop international statistical documentation programs for Atlantic swordfish and bigeye tuna.

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 the 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 NOAA Fisheries 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 documentation 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 ICCAT meeting, and implementation of the programs are expected to begin in 2003.

7.1.1 Exports

Existing programs at NOAA Fisheries monitor exports of fish products and provide Bureau of the Census data online for the public at www.st.nmfs.gov/st1/trade/index. NOAA Fisheries 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. Recent 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, 1997 - 2001.** U.S. BSD Program, NOAA Fisheries NERO.

	Commercial Landings of Atlantic BFT	Exports of Atlantic BFT	Exports of Pacific BFT	Total U.S. Exports of BFT
1997	826.8	698.7	917.4	1,616.1
1998	849.1	660.2	702.4	1,362.6
1999	876.0	735.6	95.7	831.3
2000	903.9	758.0	76.0	834.0
2001	987.0	812.3	67.0	879.0

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 2002 is also available. Preliminary data indicate that 6.7 mt of West Atlantic bluefin tuna, and 0.0 mt of Pacific bluefin tuna were exported from the United States during this time period. These figures are lower than in 2000 and 2001 in the same time period. Most landings (and exports) of bluefin tuna in the United States occur during the second half of the calendar year.

Shark Exports

NOAA Fisheries also collects trade data on the export of sharks, although not in the level of detail found in the BSD program. Some 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 1999, 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 1997-2001. Errors in the Bureau of Census data for dried shark fin exports for the years 2000 and 2001 prevent its inclusion in the table and discussion. Corrected data will be made available to the public when it is received by NOAA Fisheries.

Sharks are targeted in the coastal Pacific ocean by the driftnet thresher fishery and are caught incidental to the Bering Sea groundfish (trawl) fishery, 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 1997-2001 U.S. Exports of Shark Products (kg). Bureau of the Census data.

Year	Shark Fins Dried (kg, US$)		Non-specified Fresh Shark (kg, US$)		Non-specified Frozen Shark (kg, US$)		Total for all Products (kg, US$)	
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	NA**	NA**	430,725	784,704	345,942	814,456	776,667!	1,599,160!
2001	NA**	NA**	332,948	545,568	634,060	2,341,215	967,008!	2,886,783!

* 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.
** Table will be updated as values become available.
! Values do not include dried shark fin data.

Note that exports of shark increased substantially in 2000 and 2001 over 1999 values. The volume of non-specific frozen shark exports increased in 2001 by 83.3 percent from 2000, while the volume of non-specific fresh shark exports decreased by 22.7 percent in 2001. The average price quoted for exports of fresh shark remained relatively constant from 1999-2000 ($1.82/kg in 2000), but decreased slightly in 2001 to $1.64/kg. Frozen shark product decreased in value slightly in 2000 to $2.35/kg, but increased significantly to $3.69/kg in 2001.

It should be noted that there is no tracking of other shark products besides meat and fins. Therefore, NOAA Fisheries 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. Discussions have focused on possible bilateral, multilateral and regional agreements with other nations. The law calls for the U.S. to pursue an international ban on shark finning, and to encourage improved data collection (including biological data, stock abundance and bycatch levels, and information on the nature and extent of shark finning and trade). 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 that U.S. actions are consistent with international obligations. Determining the nature and extent of shark finning is the first step toward reaching agreements that will decrease the practice of finning worldwide.

Summary of Atlantic HMS Exports

In 2001, the United States exported 1,163,458 mt of edible fishery products in aggregate worth $3.2 billion. Fresh and frozen items (non-canned) were 999,665 mt, valued at $2.3 billion. Atlantic HMS exports are dominated by bluefin tuna and sharks. According to the *Fisheries of the United States, 2001*, 1,429 mt ww of bluefin tuna were landed in the United States in 2001 from all oceans. This represents a minor decrease from the previous year, but is less than half of the annual average for 1995-1999. Large fluctuations reflect landings of Pacific bluefin, as landings of Atlantic bluefin have remained relatively stable. Comparing total 2001 U.S. landings of bluefin with data from U.S. BSD program, after applying a 1.25 multiplier to estimate ww (most Pacific exports were dressed weight), it appears that roughly 77 percent of bluefin tuna landed in the Unites States were exported. For Atlantic bluefin tuna only, about 82 percent of landings were exported, which is consistent with recent levels.

The nature of export reporting on sharks, particularly distinctions between fins and whole fish, makes an analysis of exports too difficult. However, overseas markets provide a profitable outlet for many U.S. Atlantic HMS fishermen and may provide superior markets compared to 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 NOAA Fisheries 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 NOAA Fisheries. Additional detailed information is collected by NOAA Fisheries on bluefin tuna and swordfish imports and is discussed in further depth below. For both bluefin tuna and swordfish imports, NOAA Fisheries 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, NOAA Fisheries receives general data about that shipment (exporting country, date of entry, weight of shipment, general product form) on the entry form. NOAA Fisheries could then ensure that an importer activity report had been submitted detailing prices and specific product forms. NOAA Fisheries 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, NOAA Fisheries 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 NOAA Fisheries to track shipments of bluefin tuna and enforce dealer reporting requirements. United States imports and re-exports of bluefin tuna for 1997 through 2001, 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 NOAA Fisheries 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 generated increased 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 earlier and more recent 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, 1997-2001, in metric tons.

	U.S. BSD Program		U.S. Customs Data
	Imports	Re-exports	
1997	7.0	0.8	109.5
1998	182.6	1.8	225.6
1999	411.9	16.6	558.6
2000	361.9	99.3	453.4
2001	512.9	7.0	532.3

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 2002 is also available through the BSD program. Preliminary data indicate that 270.6 mt were imported into the United States, and 0.0 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. U.S.

implementation of the program is expected to begin in 2003. 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. In 2001, the United States imported over 4,820 mt of bigeye tuna averaging $5.40/kg, over 97 percent of which was fresh product. The leading exporters to the U.S. were Trinidad and Tobago, Brazil, and Costa Rica, together accounting for over 67 percent of U.S. imports. Bigeye tuna import data for the 2001 calendar year are shown in Table 7.4.

Table 7.4 Imports of Bigeye Tuna into the United States: 2001. Bureau of the Census data.

Year	Fresh		Frozen		Total for all Products	
	kg	US$	kg	US$	kg	US$
2001	4,684,847	25,703,005	135,192	322,158	4,820,039	26,025,163

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, NOAA Fisheries 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. This program has been in place since June 1999. Table 7.5 summarizes the bi-weekly dealer report and the COE data for the 2001 calendar year. Table 7.6 indicates the magnitude of swordfish product imports by the United States from 1997-2001.

Table 7.5 Swordfish import data collected under the Swordfish Import Monitoring Program (mt dw) for the 2001 calendar year.

	Ocean of Origin			
Flag of Harvesting Vessel	**Atlantic**	**Pacific**	**Indian**	**Total***
Australia	0.0	195.9	206.6	448.7
Barbados	4.8	0.0	0.0	4.8
Bolivia	20.1	0.0	0.0	20.1
Brazil	834.1	0.0	0.0	836.3
Canada	448.4	0.0	0.0	448.4
Chile	0.0	798.6	0.0	798.6
Costa Rica	0.0	406.9	0.0	406.9
Ecuador	0.0	326.3	0.0	326.3
El Salvador	0.0	44.6	0.0	44.6
Fiji Islands	0.0	25.5	0.0	25.5
Grenada	17.1	0.2	0.0	17.3
Indonesia	0.0	0.0	23.5	23.5
Japan	0.0	72.2	0.0	79.1
Mexico	0.0	284.8	0.0	284.8
Namibia	91.0	0.0	0.0	91.0
Netherland Antilles	3.3	0.9	0.0	4.7
New Zealand	0.0	236.4	0.0	248.8
Nicaragua	0.0	1.3	0.0	1.3
Panama	0.0	93.0	0.0	93.0
Philippines	0.0	32.4	0.0	74.9
Samoa	0.0	0.7	0.0	0.7
South Africa	214.3	0.0	0.0	225.2
Taiwan	171.8	26.2	2,633.4	2,831.5
Tonga	0.0	3.2	0.0	3.2
Trinidad & Tobago	16.1	0.0	0.0	16.4
United States	0.7	0.0	0.0	0.7
Uruguay	184.2	0.0	0.0	184.2
Venezuela	8.6	0.7	0.0	25.9
Vietnam	0.0	51.0	0.0	51.0
TOTAL	2,014.6	2,600.8	2,863.5	7,617.3
% of total swordfish imports	26.4	34.1	37.6	100.0

* Total value may not equal the sum of *Ocean of Origin* cells due to landings from unspecified waters.

Table 7.6 Swordfish Products imported: 1997-2001. Bureau of the Census data.

Year	Frozen (kg)			Fresh (kg)		Total for all products (kg)	
	Fillets	Steaks	Other	Steaks	Other	kg	$
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
2001	3,814,454	710,003	119,211	71,323	8,982,601	13,697,592	81,899,112

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 have lowered 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. Congress failed to take action on the “Mercury-Safe Seafood Act of 2001" during the 107th Congress.

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. NOAA Fisheries 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). NOAA Fisheries does not have specific product information on imported shark meat such as the proportion of fillets, steaks, or loins. NOAA Fisheries 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 increased by more than 107 percent since 1997 while imports of shark fins have decreased by approximately 35 percent (by weight) (Table 7.7).

Table 7.7 1996-2001 U.S. Imports of Shark Products. Bureau of the 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$
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
2001	50,664	1,086,716	913,421	1,389,054	123,809	1,780,726	1,087,894	4,256,496

In 2001, dried shark fin imports decreased by 15,443 kg and non-specific fresh shark decreased by 152,723 kg. Non-specific frozen shark imports increased by 33,643 kg. Imported shark fins averaged $21.45/kg, decreasing from $35.63/kg in 2000. Fresh shark averaged $1.52/kg, decreasing from $1.74/kg in 2000. Prices for non-specific frozen shark increased dramatically from $6.38/kg in 2000 to $14.38/kg in 2001. NOAA Fisheries is attempting to identify the cause and validity of this apparent price spike. The prices for imported dried shark fins decreased 39.8 percent from the previous year's values. The Shark Finning Prohibition Act was enacted in December of 2000, therefore, decreases in shark fin trade are to be expected.

Summary of Imported HMS

Atlantic swordfish is an important U.S. import. According to the *Fisheries of the United States, 2001*, approximately $19.8 million of swordfish was landed commercially from all oceans by U.S. fishermen in 2001 (4,268 mt or $2.11/lb). In contrast, $81.9 million (13,698 mt or $2.71/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. Despite increases in the U.S. quota of N. Atlantic swordfish, that are in compliance with ICCAT rebuilding programs, swordfish from the Pacific and Indian Oceans will continue to supply the U.S. market over the next few years. 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 NOAA Fisheries with information on tuna trade.

Excluding shark fin data, the value and volume of imported shark products exceeded exports in 2000 and 2001. Shark fin data was excluded due to previously identified data problems. 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 landings trends. 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 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 non compliance or fishing in a manner that diminishes the effectiveness of ICCAT conservation measures 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, NOAA Fisheries 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.

In 1999, ICCAT 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, NOAA Fisheries prohibited the importation of Atlantic bluefin tuna and its products from Equatorial Guinea.

In 2000, NOAA Fisheries prohibited the importation of bluefin tuna from Equatorial Guinea, prohibited the importation of swordfish from Belize and Honduras, and removed a prohibition on the importation of Atlantic bluefin tuna from Panama. These actions were consistent with 1999 recommendations from ICCAT.

Consistent with a 2000 ICCAT recommendation, in 2001, NMFS proposed a prohibition on the importation of Atlantic bigeye tuna and its products in any form from Belize, Honduras, Equatorial Guinea, Cambodia, and St. Vincent and the Grenadines. Honduras became a member of ICCAT on January 30, 2001. Based on this change in status and on Honduras' significant efforts to control its fleet and address ICCAT's concerns, ICCAT recommended at its 2001 meeting that its parties lift the bluefin tuna and swordfish trade embargoes in place against Honduras. At its 2002 meeting, ICCAT further decided that the bigeye tuna trade restrictions in effect against Honduras be lifted. The United States is developing regulations to remove the import prohibitions on Honduras consistent with the recommendations of ICCAT. In 2002, NMFS promulgated regulations prohibiting the importation of Atlantic bigeye tuna and its products in any form from Belize, Equatorial Guinea, Cambodia, and St. Vincent and the Grenadines consistent with ICCAT's decisions (November 20, 2002; 67 FR70023).

At the 2002 ICCAT meeting, recommendations were made to lift sanctions against Belize for bluefin tuna, swordfish, and bigeye tuna in January, 2004, pending a review of that nation's compliance with ICCAT conservation and management measures in 2003. Also, at the 2002 ICCAT meeting, recommendations were made to ban the importation of bigeye tuna from Bolivia as well as bluefin tuna, bigeye tuna, and swordfish from Sierra Leone. These recommendations are expected to enter into force in June 2003.

Data obtained by monitoring international trade in highly migratory species remains instrumental in making the decisions 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

NOAA Fisheries 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, NOAA Fisheries 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.

NOAA Fisheries 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, NOAA Fisheries 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. NOAA Fisheries expects that ICCAT will increase its use of trade data in its efforts to monitor, assess, and control fishing activities and to conserve the international resources under its authority.

Section 7 References

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