

3.6 Community and Social Update

According to National Standard 8 (NS 8), conservation and management measures should, consistent with conservation requirements, attempt to both provide for the continued participation of a community and, to the extent practicable, minimize the economic effects on the community. The information presented here addresses new data concerning the social and economic well-being of participants in the fishery and considers the impact of significant regulatory measures enacted in the past year.

3.6.1 Overview of Current Information and Rationale

The Magnuson-Stevens Act requires, among other things, that all FMPs include a fishery impact statement intended to assess, specify, and describe the likely effects of the measures on fishermen and fishing communities (§303(a)).

The National Environmental Policy Act (NEPA) also requires federal agencies to consider the interactions of natural and human environments by using a “systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences...in planning and decision-making” (§102(2)(A)). Moreover, agencies need to address the aesthetic, historic, cultural, economic, social, or health effects which may be direct, indirect, or cumulative. Consideration of social impacts is a growing concern as fisheries experience increased participation and/or declines in stocks. The consequences of management actions need to be examined to better ascertain and, if necessary, mitigate impacts of regulations on affected constituents.

Social impacts are generally the consequences to human populations that follow from some type of public or private action. Those consequences may include alterations to the ways in which people live, work or play, relate to one another, and organize to meet their needs. In addition, cultural impacts which may involve changes in values and beliefs that affect people’s way of identifying themselves within their occupation, communities, and society in general are included under this interpretation. Social impact analyses help determine the consequences of policy action in advance by comparing the status quo with the projected impacts. Although public hearings and scoping meetings provide input from those concerned with a particular action, they do not constitute a full overview of the fishery.

While geographic location is an important component of a fishing community, the transient nature of HMS may necessitate permitted fishermen to shift location in an attempt to follow the fish. Because of this characteristic, management measures for HMS often have the most identifiable impacts on fishing fleets that use specific gear types. The geographic concentrations of HMS fisheries may also vary from year to year as the behavior of these migratory fish is unpredictable. The relationship between these fleets, gear types, and geographic fishing communities is not always a direct one; however, they are important variables for understanding social and cultural impacts. As a result, the inclusion of typical community profiles in HMS management decisions is somewhat difficult as geographic factors and the use of a specific gear type have to be considered.

NMFS (2001) guidelines for social impact assessments specify that the following elements are utilized in the development of FMPs and FMP amendments:

1. The size and demographic characteristics of the fishery-related work force residing in the area; these determine demographic, income, and employment effects in relation to the work force as a whole, by community and region.
2. The cultural issues of attitudes, beliefs, and values of fishermen, fishery-related workers, other stakeholders, and their communities.
3. The effects of proposed actions on social structure and organization; that is, on the ability to provide necessary social support and services to families and communities.
4. The non-economic social aspects of the proposed action or policy; these include life-style issues, health and safety issues, and the non-consumptive and recreational use of living marine resources and their habitats.
5. The historical dependence on and participation in the fishery by fishermen and communities, reflected in the structure of fishing practices, income distribution and rights.

To help develop this information for the 1999 FMP and the 1999 Billfish Amendment, NMFS contracted with Dr. Doug Wilson, from the Ecopolicy Center for Agriculture, Environmental and Resource Issues at Rutgers, the State University of New Jersey. Dr. Wilson and his colleagues completed their field work in July 1998. Their study considered HMS that have important commercial and recreational fisheries extending along the Atlantic and Gulf Coast from Maine to Texas and in the Caribbean. The study investigated the social and cultural characteristics of fishing communities in five states and one U.S. territory: Massachusetts, New Jersey, North Carolina, Florida, Louisiana, and Puerto Rico. These areas were selected because they each have important fishing communities that could be affected by measures included in the 1999 FMP and the 1999 Billfish Amendment, and because they are fairly evenly spread along the Atlantic and Gulf Coast and the Caribbean. For each state or territory, a profile of basic sociologic information was compiled, with at least two coastal communities visited for further analysis. Towns were selected based on HMS landings data, the relationship between the geographic communities and the fishing fleets, the existence of other community studies, and inputs from the Advisory Panels for HMS and Billfish. Complete descriptions of the study results can be found in Chapter 9 of the 1999 FMP and Chapter 7 of the Billfish Amendment. In 2002, NMFS contracted the Virginia Institute of Marine Science (VIMS) at the College of William and Mary to re-evaluate several of the baseline communities. NMFS recently received a report from James Kirkley at VIMS providing updated community profiles that are included in Section 3.6.3.

3.6.2 Social Impacts of Selected 2004 Regulatory Actions

Final Rule Implementing ICCAT Trade Restriction Measures (69 FR 70396, December 6, 2004).

This action adjusted the regulations governing the trade of species regulated by the International Commission for the Conservation of Atlantic Tunas (ICCAT) in the North and South Atlantic Ocean to implement recommendations adopted at the 2002 and 2003 meetings of ICCAT. This final rule lifted or implemented import prohibitions for bigeye tuna, bluefin tuna, and swordfish on Honduras, St. Vincent and the Grenadines, Belize, Sierra Leone, Bolivia, and Georgia. This rule also prohibited imports from vessels on the ICCAT illegal, unreported, and unregulated fishing list and from vessels that are not listed on ICCAT's record of vessels that are authorized to fish in the Convention Area. Additionally, this rule required issuance of a chartering permit before a vessel begins fishing under a chartering arrangement.

NMFS conducted an economic analysis, a Regulatory Impact Review (RIR), and Final Regulatory Flexibility Analysis (FRFA). The results of these analyses indicate that the economic impacts of these actions would be minimal. The final rule prohibited the importation of several HMS species from two countries and lifted prohibitions against three others in addition to imposing monitoring of chartering arrangements and prohibiting the import of HMS species from IUU fishing vessels. None of these nations are responsible for a significant portion of the imports of tuna-like species to the United States. As NMFS does not believe the IUU vessels and prohibited countries contribute a significant amount of HMS to U.S. markets, the measures are not anticipated to have any noticeable economic impact. Thus, the overall cumulative effects of this action are not significant.

The measures implemented by this rule primarily impact foreign fishing vessels, U.S. fish dealers, and U.S. vessels that enter chartering arrangements. This action is not expected to have substantial adverse impacts on U.S. public health and safety. For further background information, please see the Environmental Assessment and associated Final Regulatory Flexibility Analysis for this rule, available from the HMS Management Division of NMFS or at http://www.nmfs.noaa.gov/sfa/hms/Trade_Rule/Trade_Restrictions_Rule_FinalEA.pdf.

Final Rule Atlantic Commercial Shark Quotas and Fishing Season (69 FR 69537, November 30, 2004).

This final rule adjusted the regional quotas and establishes new trimester season quotas for large coastal sharks (LCS) and small coastal sharks (SCS) based on updated landings information. This final rule included a framework mechanism for the annual adjustment of quotas, a method of accounting for over- or underharvests in the transition from semi-annual to trimester seasons, and a new process for notifying participants of season opening and closing dates and quotas. This final rule also announced the opening and closing dates for the LCS fishery based on adjustments to the regional and trimester quotas. This action was necessary to ensure that the landings quotas in the Atlantic commercial shark fishery represent the latest landings data and accurately reflect historic and current fishing effort.

The actions are not expected to have any significant social or economic impacts. NMFS is revising the regional quotas based on updated historical landings data from both fishermen and

dealers, for LCS and SCS. In the short term, re-adjusting the current regional quotas to account for increased fishing effort in the Gulf of Mexico and North Atlantic could have a positive economic effect by ensuring quotas reflect current fishing effort. There may be negative economic consequences resulting from the reduction in the South Atlantic quotas for LCS. However, these updated regional quotas, which are based on current fishery data, should provide a more accurate reflection of fishing effort by region and species group in the Atlantic Ocean. A framework mechanism for annual adjustment of regional quotas could prevent future closures due to overharvest and allow quotas to more accurately reflect current effort and landings in all regions. Only unused quota (up to 10 percent) could be transferred between regions during an annual quota adjustment. Removing the requirement for NMFS to file notification of fishing seasons' length at least 30 days prior the beginning of the season is not anticipated to have any significant economic or social impacts on participants. The action is not expected to have adverse impacts on public health and safety. For further background information, please see the Environmental Assessment and associated Final Regulatory Flexibility Analysis for this rule, available from the HMS Management Division of NMFS or at <http://www.nmfs.noaa.gov/sfa/hms/hmsdocuments.html> - shark.

Final Rule Implementing ICCAT Trade Monitoring Measures (69 FR 67268, November 17, 2004).

This action implemented the international trade tracking recommendations of the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Inter-American Tropical Tuna Commission (IATTC) for bluefin tuna, swordfish, and frozen bigeye tuna, regardless of ocean area of origin. Trade monitoring requirements for species covered under the recommendations for southern bluefin tuna were established by this rule, including: a highly migratory species (HMS) international trade permit; statistical documents and re-export certificates; and recordkeeping, reporting, and inspection requirements.

NMFS prepared a RIR/FRFA that examines the impacts of the alternatives for implementing the ICCAT and IATTC recommendations for international trade monitoring programs. The final rule would affect approximately 1,890 (930 foreign and 960 domestic) seafood businesses that participate in international trade of swordfish, bluefin tuna, southern bluefin tuna and bigeye tuna, all of which are considered small entities. Impacts to businesses would occur in two areas - permitting and reporting (reporting includes documentation and recordkeeping). NMFS expects only minor negative economic impacts from the final rule because the regulatory measures only involve adjusting permitting and reporting requirements. For further background information, please see the Final Regulatory Flexibility Analysis for this rule, available from the HMS Management Division of NMFS or at http://www.nmfs.noaa.gov/sfa/hms/Trade_Rule/HMS_ITP_FinalFRFA_Nov2004.pdf

Final Rule Reduction of Sea Turtle Bycatch and Bycatch Mortality in the Atlantic Pelagic Longline Fishery (69 FR 40734, July 6, 2004).

This final rule implemented new sea turtle bycatch and bycatch mortality mitigation measures for all Atlantic vessels that have PLL gear onboard and that have been issued, or are required to have, Federal HMS limited access permits, consistent with the requirements of the Endangered Species Act (ESA), the Magnuson-Stevens Fishery Conservation and Management

Act (Magnuson-Stevens Act or M-S Act), and other domestic laws. These measures included mandatory circle hook and bait requirements, and mandatory possession and use of sea turtle release equipment to reduce bycatch mortality. This final rule also allowed vessels with pelagic longline gear onboard that have been issued, or are required to have, Federal HMS limited access permits to fish in the Northeast Distant (NED) Closed Area, if they possess and/or use certain circle hooks and baits, sea turtle release equipment, and comply with specified sea turtle handling and release protocols.

The final measures likely resulted in an initial increase in costs, but may have resulted in longer-term cost savings because circle hooks have lower replacement costs than “J”-hooks, and because the newly-required release gears may result in increased hook retention. An informal internet and telephone survey of hook suppliers provided a range in price of approximately \$0.28 to \$0.50 (\$0.3539 avg) per hook for 16/0 circle hooks, and \$0.26 to \$0.66 (\$0.4176 avg) per hook for 18/0 commercial grade circle hooks. Large commercial grade “J”-hooks range from approximately \$0.26 to \$1.00 (avg. \$0.5733) per hook. Assuming that an average of 2,500 hooks per vessel are needed to initially comply with the hook requirements (equip vessels with enough hooks for one trip), the compliance cost for 16/0 circle hooks, on a per vessel basis, may range from \$697.50 to \$1241.75 with an anticipated average cost of approximately \$884.75. Similarly, assuming that an average of 2,500 18/0 circle hooks per vessel are needed to initially comply with the hook requirements, the compliance cost, on a per vessel basis, may range from \$657.25 to \$1,650.00, with an anticipated average cost of approximately \$1,044.00. The circle hook requirements should not have increased the needed skill level required for HMS fisheries, as the physical act of switching hook types is a normal aspect of commercial fishing operations. However, there probably was a period of time during which fishing crews adjust, as with any new gear. Circle hooks are not expected to be prohibitively difficult to work with, as some vessels are already utilizing them.

The requirement to purchase and use sea turtle release gear would require additional skills and would impose a compliance cost for purchase of the gear of between \$485.00 and \$1,056.50. These costs may be reduced if fishermen are able to construct various pieces of equipment themselves, rather than purchasing pre-assembled gear from a commercial supplier. In addition, specific protocols regarding the proper use of sea turtle release equipment and onboard turtle handling procedures are being implemented. These protocols may increase the needed skill level required for HMS fisheries. A document containing the sea turtle careful release protocols will be issued, and will be required to be onboard. Also, NMFS will conduct training on the proper use of the release equipment. Traditionally, bait accounts for 16 to 26 percent of the total costs per trip. Any fluctuations in the price and availability of mackerel, whole finfish, or squid baits could have a substantial positive or negative impact on profitability. These baits are generally abundant, but availability will likely depend upon harvesting and distributional capacities. There could also be unquantifiable compliance costs as fishing crews who have not traditionally fished with a particular hook and bait combination familiarize themselves with the most efficient techniques. For further background information, please see the Environmental Impact Statement for this rule, available from the HMS Management Division of NMFS or at <http://www.nmfs.noaa.gov/sfa/hms/hmsdocuments.html> - feis.

3.6.3 Summary of New Social and Economic Data Available

NMFS recently received updated community profiles from James Kirkley at VIMS. Profiles were developed for the United States; each of the states having ports with reported landings of HMS; each of the counties having ports with reported landings of HMS; and each of the corresponding ports. The profiles were developed using data from the 1990 and 2000 U.S. Census.

In 1990, the U.S. had a total population of 248.7 million (Table 3.69). The population increased to 281.4 million in 2000. As might be expected, the population was roughly half female and half male. Individuals between 18 and 44 years of age comprised the largest proportion of the population in 2000. The dominant race was white. There were 105.5 million total households. Between 1990 and 2000, the total number of business establishments in the U.S. increased from 6.2 to 7.1 million (Table 3.70). Retail trade and service-based businesses accounted for more than half the total number of establishments in the U.S. The number of establishments engaged in forestry, fishing, hunting, and agriculture was considerably below the number in 1990—84,811 in 1990 and 26,076 in 2000.

Table 3.69 Demographics, United States

<u>Demographics</u>	2000	1990
Total Population	281,421,906	248,709,873
Sex		
Male	138,053,563	121,239,418
Female	143,368,343	127,470,455
Age		
< 17	72,293,812	63,604,432
18-44	112,183,705	107,492,601
45- 64	61,952,636	46,371,009
> 65	34,991,753	31,241,831
Race		
White	211,460,626	199,686,070
Black or African American	34,658,190	29,986,060
American Indian and Alaska Native	2,475,956	1,959,234
Asian	10,242,998	6,908,638
Native Hawaiian and Other Pacific Islander	398,835	365,024
Other	22,185,301	9,804,847
Household		
Total	105,480,101	91,947,410
Family households	71,787,347	64,517,947
Nonfamily households	33,692,754	27,429,463
Households with individuals under 18 years	38,022,115	
Households with individuals 65 years and over	24,672,708	
Average household size	3	3
Average family size	3	

Housing Occupancy		
Total housing units	115,904,641	102,263,678
Vacant housing units	10,242,540	10,316,268
Housing Tenure		
Owner-occupied housing units	69,815,753	59,024,811
Renter-occupied housing units	35,664,348	32,922,599

Table 3.70 Number of Establishments by Industry, United States, 1990-2000

Industry	2000	1990
Total number of establishments	7,070,048	6,175,563
Forestry, fishing, hunting, and agriculture	26,076	84,811
Mining	23,738	30,359
Construction	709,590	578,375
Manufacturing	354,498	378,087
Wholesale trade	446,237	476,355
Retail trade	1,113,573	1,529,707
Transportation & Utilities	340,935	235,196
Finance, Insurance, Real Estate, Rental, & Leasing	723,904	544,736
Services	3,331,497	2,317,937

Gloucester, Massachusetts

Based on available data, there does not appear to be a large level of HMS landings in Gloucester, Massachusetts. In 1990, the population of Gloucester equaled 28,716; there was a minimal increase of approximately 1,500 individuals between 1990 and 2000 (Table 3.71). The dominant age group in both periods was the 18-44 year old group. The distribution of the population by sex was roughly equal at 50 percent. The major race is white (29,361 individuals in 2000). The number of business establishments increased from 728 to 959 establishments between 1990 and 2000 (Table 3.72). The major industries were retail trade and services. The number of establishments engaged in forestry, fishing, hunting, and agriculture was relatively unchanged—45 in 1990 and 44 in 2000.

Table 3.71 Demographic Profile, Gloucester, MA.

<u>Demographics</u>	2000	1990
Total Population	30273	28716
Sex		
Male	14502	13827
Female	15771	14889
Age		
< 17	6659	6143
18-44	11012	12359
45- 64	7889	5787
> 65	4713	4427

Demographics	2000	1990
Race		
White	29361	28546
Black or African American	186	45
American Indian and Alaska Native	37	28
Asian	218	53
Native Hawaiian and Other Pacific Islander	7	0
Other	464	44
Household		
Total	12592	11550
Family households	7896	7634
Nonfamily households	4696	3916
Households with individuals Under 18 years	3723	
Households with individuals 65 years and over	3379	
Average household size	2.38	
Average family size	3	
Housing Occupancy		
Total housing units	13958	13125
Vacant housing units	1366	1546
Housing Tenure		
Owner-occupied housing units	7523	6687
Renter-occupied housing units	5069	4892

Table 3.72 Number of Establishments, Gloucester, MA.

Industry Code Description	2000	1990
Total number of establishments	959	728
Forestry, fishing, hunting, and agriculture	44	45
Mining	0	1
Construction	86	76
Manufacturing	54	62
Wholesale trade	58	56
Retail trade	127	183
Transportation & Utilities	48	35
Finance, Insurance, Real Estate, Rental, & Leasing	61	52
Services	481	218

New Bedford, Massachusetts

New Bedford, Massachusetts has apparently become a bedroom or commuter community for Providence, Rhode Island and Boston, Massachusetts. It has an extremely long history of commercial fishing, but has experienced considerable declines in the social and economic importance of the commercial seafood industry since the implementation of the Fisheries

Conservation and Management Act, which has substantially affected the groundfish and sea scallop fisheries based in New Bedford. Between 1990 and 2000, New Bedford experienced a decrease in its population of approximately 6,000 individuals—99,922 in 1990 to 93,768 in 2002 (Table 3.73). The major age group is the 18-44 group. It has a disproportionately high percent of females relative to males—53 percent females and 47 percent males. The major race is white—79 percent. Black or African American constitutes the second largest percentage of the population—4.4 percent. For unknown reasons, the Census lists zero for number of establishments engaged in forestry, fishing, hunting, and agriculture (Table 3.74). In 2000, there were 1,015 business establishments in New Bedford. The major industries, in terms of number of establishments, were retail trade and services, which were followed by manufacturing and construction.

Table 3.73 Demographic Profile, New Bedford, MA.

Demographics	2000	1990
Total Population	93768	99922
Sex		
Male	44173	46648
Female	49595	53274
Age		
< 17	23327	24980
18-44	35892	39549
45- 64	18901	18031
> 65	15648	17362
Race		
White	73950	87758
Black or African American	4112	3833
American Indian and Alaska Native	579	405
Asian	614	345
Native Hawaiian and other Pacific Islander	44	0
Other	14469	7581
Household		
Total	38178	38646
Family households	24083	26677
Nonfamily households	14095	11969
Households with individuals under 18 years	13036	
Households with individuals 65 years and over	11060	
Average household size	2.40	
Average family size	3.01	
Housing Occupancy		
Total housing units	41511	41760
Vacant housing units	3333	2972
Housing Tenure		
Owner-occupied housing units	16711	17003
Renter-occupied housing units	21467	21785

Table 3.74 Number of Establishments, New Bedford, MA.

Industry Code Description	2000	1990
Total number of establishments	1015	
Forestry, fishing, hunting, and agriculture	0	
Mining	2	
Construction	94	
Manufacturing	98	
Wholesale trade	47	
Retail trade	196	
Transportation & Utilities	36	
Finance, Insurance, Real Estate, Rental, & Leasing	69	
Services	473	

Barnegat Light, New Jersey

Barnegat Light is one of several municipalities on Long Beach Island, which is a large “barrier beach” island (NOAA, 2000). According to the 1990 and 2000 Census, the population increased from 1,160 in 1990 to 1,690 in 2000 (Table 3.75). The age distribution is quite different than many of the other HMS communities; in 2000, approximately 29 percent of the population was less than or equal to 17 years of age; 37 percent were between 18 and 44; 24 percent were between 45 and 64; and 9 percent were 65 or older. The major race is white (96 percent); less than five percent of the population is listed as a race other than white. The year 2000 Census indicates that there were 249 establishments in Barnegat Light (Table 3.76). Services and construction were the major industry in terms of number of establishments. Retail trade ranked third. Seven establishments were listed as engaged in forestry, fishing, hunting, and agriculture.

Table 3.75 Demographic Profile, Barnegat Light, NJ.

Demographics	2000	1990
Total Population	1690	1160
Sex		
Male	869	560
Female	821	634
Age		
< 17	493	317
18-44	630	487
45-64	410	215
> 65	157	141
Race		
White	1617	1134
Black or African American	9	17
American Indian and Alaska Native	2	2
Asian	22	3
Native Hawaiian and other Pacific Islander	0	4

Demographics	2000	1990
Other	40	0
Household		
Total Households	595	383
Family households	443	331
Nonfamily households	152	
Households with individuals under 18 years	250	
Households with individuals 65 years and over	121	
Average household size	2.84	
Average family size	3.31	
Housing Occupancy		
Total housing units	640	496
Vacant housing units	45	72
Housing Tenure		
Owner-occupied housing units	504	348
Renter-occupied housing units	91	76

Table 3.76 Number of Business Establishments, Barnegat Light, NJ

Industry Code Description	2000
Total number of establishments	249
Forestry, fishing, hunting, and agriculture	7
Mining	3
Construction	52
Manufacturing	4
Wholesale trade	11
Retail trade	46
Transportation & Utilities	12
Finance, Insurance, Real Estate, Rental, & Leasing	17
Services	97

Brielle Community, New Jersey

Brielle is a borough in the southernmost region of Monmouth County. In 1990, the population was 4,406 (Table 3.77). Brielle experienced a modest increase in the population in 2000 (from 4,406 to 4,893 individuals). The percent of males and females remained virtually unchanged between 1990 and 2000—48 percent males and 52 percent females. The age distribution is relatively the same for 18-44 (30 percent) and 45-64 (29 percent) year olds; between 1990 and 2000, the percent of the total population 65 or older declined from 20 to 18 percent. Whites accounted for approximately 93 percent of the population in both 1990 and 2000. The percent of other races, however, declined between 1990 and 2000. Census lists 183 business establishments for Brielle (Table 3.78). Retail trade, services, and construction accounted for 147 of the total establishments. One establishment was associated with forestry, fishing, hunting, and agriculture.

Table 3.77 Demographic Profile, Brielle, NJ.

Demographics	2000	1990
Total Population	4893	4406
Sex		
Male	2336	2123
Female	2557	2283
Age		
< 17	1130	870
18-44	1476	1472
45- 64	1419	1195
> 65	868	869
Race		
White	4553	4121
Black or African American	172	240
American Indian and Alaska Native	3	10
Asian	33	26
Native Hawaiian and other Pacific Islander	0	0
Other	132	9
Household		
Total	1938	1735
Family households	1414	1280
Nonfamily households	524	455
Households with individuals under 18 years	640	
Households with individuals 65 years and over	633	
Average household size	2.52	2.54
Average family size	3	
Housing Occupancy		
Total housing units	2123	1986
Vacant housing units	185	251
Housing Tenure		
Owner-occupied housing units	1617	1428
Renter-occupied housing units	321	307

Table 3.78 Number of Business Establishments, Brielle, NJ.

Industry Code Description	2000
Total number of establishments	183
Forestry, fishing, hunting, and agriculture	1
Construction	30
Manufacturing	3
Wholesale trade	7
Retail trade	35
Transportation & Utilities	12
Finance, Insurance, Real Estate, Rental, & Leasing	13
Services	82

Hatteras, North Carolina

Hatteras Township is located in the “Outer Banks” of North Carolina. It consists of the communities of Avon, Buxton, Frisco, and Hatteras. According to the 1990 and 2000 Census’, the population increased very modestly—from 2,584 in 1990 to 2,642 in 2000 (Table 3.79). The number of males and females were approximately equal in 2000 (1,323 males and 1,319 females); they were also nearly equal in 1990 (1,305 males and 1,279 females). The age distribution for individuals 17 or younger and 65 or older did not substantially change between 1990 and 2000; the distribution for the 18-44 and 45-64 year old groups, however, substantially changed (18-44: decreased from 43 to 35 percent between 1990 and 2000; 45-64: increased from 21-30 percent. U.S. Census lists 74 establishments in 2000. Services and transportation accounted for 65 percent of the total number of establishments in 2000 (Table 3.80). Two establishments were listed for forestry, fishing, hunting, and agriculture.

Table 3.79 Demographic Profile, Hatteras, NC.

Demographics	2000	1990
Total Population	2642	2584
Sex		
Male	1323	1305
Female	1319	1279
Age		
< 17	531	577
18-44	934	1111
45- 64	794	557
> 65	383	339
Race		
White	2605	2567
Black or African American	4	5
American Indian and Alaska Native	2	8
Asian	1	2
Native Hawaiian and other Pacific Islander	2	0
Other	28	2
Household		
Total	1171	1077
Family households	758	738
Nonfamily households	413	339
Households with individuals under 18 years	318	
Households with individuals 65 years and over	279	
Average household size	2.24	2.38
Average family size	2.73	
Housing Occupancy		
Total housing units	2178	1861
Vacant housing units	1007	784
Housing Tenure		
Owner-occupied housing units	902	798
Renter-occupied housing units	269	279

Table 3.80 Number of Business Establishments, Hatteras, NC.

Industry Code Description	2000
Total number of establishments	74
Forestry, fishing, hunting, and agriculture	2
Mining	0
Construction	5
Manufacturing	2
Wholesale trade	2
Retail trade	8
Transportation & Utilities	15
Finance, Insurance, Real Estate, Rental, & Leasing	7
Services	33

Wanchese Community, North Carolina

Wanchese, North Carolina is part of Roanoke Island, which is part of the Outer Banks. Although commercial fishing has historically been a major industry, there has been an increasing emphasis on recreational angling and tourism. Between 1990 and 2000, the population increased from 1,380 to 1,527 individuals (Table 3.81). The population is roughly evenly divided into males and females. The major age group is the 18-44 year old individuals. The most dramatic shifts in the population distribution have been the decline in the percent of individuals 17 or younger and increase in the 45-64 year old group. Whites accounted for the majority of the population in both 1990 and 2000—99 percent in 1990 and 98 percent in 2000. Between 1990 and 2000, the total number of establishments increased from 38 to 56. Manufacturing, which includes fish processing, had the largest number of establishments (9) in 1990 (Table 3.82). In 2000, however, the service sector had the largest number of establishments; manufacturing increased to 10 in 2000. The number of establishments engaged in forestry, fishing, hunting, and agriculture increased from two in 1990 to four in 2000.

Table 3.81 Demographic Profile, Wanchese, NC.

Demographics	2000	1990
Total Population	1527	1380
Sex		
Male	774	696
Female	753	684
Age		
< 17	358	414
18-44	617	582
45- 64	368	229
> 65	184	155
Race		
White	1498	1366
Black or African American	5	1

American Indian and Alaska Native	9	4
Asian	2	5
Native Hawaiian and other Pacific Islander	0	0
Other	13	4
Household		
Total	614	513
Family households	433	371
Nonfamily households	181	142
Households with individuals under 18 years	215	
Households with individuals 65 years and over	137	
Average household size	2.49	2.69
Average family size	2.96	
Housing Occupancy		
Total housing units	690	583
Vacant housing units	76	70
Housing Tenure		
Owner-occupied housing units	465	384
Renter-occupied housing units	149	129

Table 3.82 Number of Business Establishments, Wanchese, NC.

Industry Code Description	2000	1990
Total number of establishments	56	38
Forestry, fishing, hunting, and agriculture	4	2
Mining	0	0
Construction	5	7
Manufacturing	10	9
Wholesale trade	9	6
Retail trade	6	5
Transportation & Utilities	4	2
Finance, Insurance, Real Estate, Rental, & Leasing	0	1
Services	18	6

Dulac, Louisiana

Dulac, Louisiana has historically been a fishing community. It does not, however, have many local residents engaged in the HMS fishery (Wilson et al. 1998). Dulac, however, has typically been the major U.S. port for landings of highly migratory species. It also is an area undergoing major land changes because of global climate warming. Dulac is located in Terrebonne Parish, which is about 15 miles south of Houma. In 1990, the population was 3,273 individuals; it declined to 2,458 in 2000 (Table 3.83). The number of males and females in both 1990 and 2000 were nearly equal; actually, Dulac reported the same number of males as it did females in 2000. Individuals between 18 and 44 comprise the largest proportion of the population; the second age group with the highest population is the 45-64 year olds. Whites comprise the largest proportion of race—49 and 54 percent in, respectively, 1990 and 2000. Blacks or African Americans account for less than 3 percent. American Indian and Native

Alaskans accounted for 48 and 39 percent of the total population, respectively, in 1990 and 2000. As noted in Wilson et al. (1998), however, this latter category is made up mostly of the Houma Indians, which is a tribe not recognized by the U.S. government. Census 2000 lists 42 establishments for 2000 (Table 3.84). The largest numbers of establishments are in services (7), wholesale trade (8), retail trade (7), manufacturing (7), and forestry, fishing, hunting, and agriculture (5).

Table 3.83 Demographic Profile, Dulac, LA

Demographics	2000	1990
Total Population	2458	3273
Sex		
Male	1229	1615
Female	1229	1658
Age		
≤17	772	1194
18 – 44	884	1326
45 – 64	561	558
≥65	241	195
Race		
White	1327	1617
Black or African American	61	74
American Indian and Alaska Native	969	1573
Asian	12	0
Native Hawaiian and other Pacific Islander	0	0
Other	89	9
Household		
Total Households	768	922
Family households	609	791
Nonfamily households	159	131
Households with individuals under 18 years	359	
Households with individuals 65 years and over	190	195
Average household size	3.20	
Average family size	3.55	
Housing Occupancy		
Total housing units	1063	1182
Vacant housing units	295	272
Housing Tenure		
Owner-occupied housing units	609	729
Renter-occupied housing units	159	181

Table 3.84 Number of Business Establishments, Dulac, LA

Industry Code Description	2000
Total number of establishments	42
Forestry, fishing, hunting, and agriculture	5
Mining	3

Construction	2
Manufacturing	7
Wholesale trade	8
Retail trade	7
Transportation & Utilities	1
Finance, Insurance, Real Estate, Rental, & Leasing	2
Services	7

Venice, Louisiana

Venice is another Louisiana community with historical ties to the commercial fishing industry. In the past 20 years, however, oil and recreational fishing have become increasingly important for the economy of Venice. Wilson et al. (1998) note, however, few, if any, Venice residents commercially harvest highly migratory species. Demographic information on Venice is combined with Boothville. Like Dulac, the population of Venice has declined—from 2,743 in 1990 to 2,220 in 2000 (Table 3.85). Males outnumber females by a factor of 1.04 males per female. The number of individuals 17 or younger and 18-44 declined between 1990 and 2000. Individuals aged 45-64 increased from 426 to 491 individuals between 1990 and 2000. Whites account for a majority of the resident population, but blacks or African Americans accounted for 29 percent of the total population in both 1990 and 2000. Census indicates that the number of establishments equaled 105 and 99, respectively, in 1990 and 2000 (Table 3.86). The major industries in terms of number of establishments are services, transportation and utilities, and retail trade. Combined, they account for between 75 and 79 percent of the total number of establishments.

Table 3.85 Demographic Profile, Boothville and Venice, LA

<u>Demographics</u>	2000	1990
Total Population	2220	2743
Sex		
Male	1133	1403
Female	1087	1340
Age		
< 17	703	989
18-44	860	1155
45- 64	491	426
> 65	166	173
Race		
White	1375	1810
Black or African American	638	783
American Indian and Alaska Native	75	80
Asian	89	62
Native Hawaiian and other Pacific Islander	0	0
Other	43	8
Household		
Total	746	844

Family households	584	694
Nonfamily households	162	150
Households with individuals under 18 years	361	
Households with individuals 65 years and over	137	
Average household size	2.96	3.25
Average family size	3.38	
Housing Occupancy		
Total housing units	933	974
Vacant housing units	187	130
Housing Tenure		
Owner-occupied housing units	650	699
Renter-occupied housing units	96	145

Table 3.86 Number of Business Establishments, Boothville and Venice, LA

Industry Code Description	2000	1990
Total number of establishments	99	105
Forestry, fishing, hunting, and agriculture	1	2
Mining	4	7
Construction	4	6
Manufacturing	1	0
Wholesale trade	4	8
Retail trade	18	27
Transportation & Utilities	21	21
Finance, Insurance, Real Estate, Rental, & Leasing	7	3
Services	39	31
Miscellaneous		6

Islamorada, Florida

Islamorada has been subject to considerable expansion. In 1990, the population was 1,220 individuals; in 2000, the population was 6,846—429.5 percent over a ten-year period (Table 3.87). The population was roughly half male and half female in both census years. The pattern of age distribution, however, changed between 1990 and 2000. In 1990, the dominant age group was 18 to 44 years; in 2000, the dominant age group was 45-64 years of age. The population is 97 percent white. Between 1990 and 2000, the number of business establishments increased from 220 to 268 (Table 3.88). Services and retail trade accounted for 74 percent of the total number of establishments. The number of business establishments engaged in forestry, fishing, hunting, and agriculture decreased from three in 1990 to zero in 2000.

Table 3.87 Demographic Profile, Islamorada

Demographics	2000	1990
Total Population	6846	1220
Sex		

Demographics	2000	1990
Male	3626	659
Female	3220	561
Age		
< 17	1062	131
18-44	2192	499
45- 64	2437	365
> 65	1155	225
Race		
White	6630	1179
Black or African American	31	17
American Indian and Alaska Native	15	3
Asian	42	1
Native Hawaiian and other Pacific Islander	6	1
Other	122	19
Household		
Total	3174	646
Family households	1854	319
Nonfamily households	1320	327
Households with individuals under 18 years	619	
Households with individuals 65 years and over	789	
Average household size	2.10	1.86
Average family size	2.63	
Housing Occupancy		
Total housing units	5461	966
Vacant housing units	2287	320
Housing Tenure		
Owner-occupied housing units	2275	394
Renter-occupied housing units	917	252

Table 3.88 Number of Business Establishments, Islamorada

Industry Code Description	2000	1990
Total number of establishments	268	220
Forestry, fishing, hunting, and agriculture	0	3
Mining	0	0
Construction	16	13
Manufacturing	10	6
Wholesale trade	5	4
Retail trade	55	73
Transportation & Utilities	17	10
Finance, Insurance, Real Estate, Rental, & Leasing	23	29
Services	142	82
Miscellaneous		17

Pompano, Florida

Pompano is located near Ft. Lauderdale, Florida. It does have a small commercial, longline fleet. Between 1996 and 2002, landings, mostly tuna and swordfish, generally increased. Landings peaked in 2000 at 313.4 thousand pounds. In 2002, landings were 272.4 thousand pounds. It is a community noted for yacht sales and recreational angling. Between 1990 and 2000, the population increased from 72,411 to 78,191 individuals (Table 3.89). In terms of sex, Pompano has experienced a shift or change in the percentage of the population—it went from a 48/52 percent (male to female) ratio in 1990 to a 49/51 percent ratio in 2000. The percent of the total population by each age group remained relatively constant between 1990 and 2000; the 18-44 group declined by one percent; the 45-64 group increased by two percent; and the 65 and older group decreased by two percent. Census lists 4,964 establishments for Pompano Beach in 2000 (Table 3.90). The industry having the highest number of establishments is services. Construction, wholesale trades, retail trades, and finance and related industries accounted for 47 percent of the total number of establishments.

Table 3.89 Demographic Profile, Pompano

Demographics	2000	1990
Total Population	78191	72411
Sex		
Male	38565	34829
Female	39626	37852
Age		
< 17	13870	12388
18-44	28487	27001
45- 64	17570	14746
> 65	18264	18276
Race		
White	52989	50666
Black or African American	19897	20625
American Indian and Alaska Native	186	104
Asian	636	393
Native Hawaiian and other Pacific Islander	22	22
Other	4461	601
Household		
Total	35197	32157
Family households	18444	18446
Nonfamily households	16753	13711
Households with individuals under 18 years	7267	
Households with individuals 65 years and over	12942	
Average household size	2.13	2.17
Average family size	2.85	
Housing Occupancy		
Total housing units	44496	42719
Vacant housing units	9299	10562
Housing Tenure		

Demographics	2000	1990
Owner-occupied housing units	22110	20343
Renter-occupied housing units	13087	11814

Table 3.90 Number of Business Establishments, Pompano Beach

Industry Code Description	2000
Total number of establishments	4964
Forestry, fishing, hunting, and agriculture	9
Mining	0
Construction	523
Manufacturing	333
Wholesale trade	578
Retail trade	710
Transportation & Utilities	200
Finance, Insurance, Real Estate, Rental, & Leasing	504
Services	2107

Panama City, Florida

Panama City is located on the Gulf of Mexico in the Florida Panhandle. It is a relatively small city, but does have significant landings of highly migratory species. In 2002, 220.9 thousand pounds of highly migratory species were reported as being landed in Panama City. It is recognized as a major recreational angling center in the Florida Panhandle. Between 1990 and 2000, Panama City experienced a modest increase in its population—from 34,378 in 1990 to 36,417 in 2000 (Table 3.91). Since 1990, there has been an increase in the male population, as a percent of the total population, with a corresponding decrease in the percent of the total population by females—males: from 47 to 49 percent and females: from 53 to 51 percent. The 18-44 year old group is the dominant age group, in terms of percent of total population—39 percent in both 1990 and 2000. The percent of the total population by individuals 17 or younger declined between 1990 and 2000—from 25 to 23 percent. The number of establishments in Panama City equaled 3,324 in 2000 (Table 3.92). Services and retail trade accounted for nearly 67 percent of the total number of establishments. Forestry, fishing, hunting, and agriculture accounted for only 0.5 percent of the total number of establishments.

Table 3.91 Demographic Profile, Panama City (City)

Demographics	2000	1990
Total Population	36417	34378
Sex		
Male	17683	16094
Female	18734	18284
Age		
< 17	8361	8430
18-44	14380	13614
45- 64	7877	6499

Demographics	2000	1990
> 65	5799	5835
Race		
White	26819	25954
Black or African American	7813	7500
American Indian and Alaska Native	231	215
Asian	564	577
Native Hawaiian and Other Pacific Islander	28	6
Other	962	126
Household		
Total	14819	14053
Family households	9039	9127
Nonfamily households	5780	4926
Households with individuals Under 18 years	4570	
Households with individuals 65 years and over	4035	
Average household size	2.3	2.38
Average family size	2.92	
Housing Occupancy		
Total housing units	16548	15928
Vacant housing units	1729	1875
Housing Tenure		
Owner-occupied housing units	8565	8193
Renter-occupied housing units	6254	5860

Table 3.92 Number of Business Establishments, Panama City, FL

Industry Code Description	2000
Total number of establishments	3324
Forestry, fishing, hunting, and agriculture	17
Construction	319
Manufacturing	110
Wholesale Trade	155
Retail Trade	648
Transportation & Utilities	144
Finance, Insurance, Real Estate, Rental, & Leasing	366
Services	1563

3.7 International Trade and Fish Processing

Several regional fishery management organizations (RFMOs) including ICCAT have taken steps to improve collection of international trade data to further international conservation policy for management of HMS. While RFMOs cannot re-create information about stock production based on trade data, this information can be used provisionally to estimate landings