

9.0 SOCIAL IMPACT AND ENVIRONMENTAL JUSTICE ASSESSMENTS

This section analyzes the social impacts of the final actions on fishing communities and minority and low-income populations. Additional social impacts are discussed in Section 7 under each alternative. The HMS FMP has additional information regarding communities and community profiles for communities that depend to some extent on the harvesting of Atlantic HMS.

NMFS seeks to improve its understanding of all fishing communities, particularly the pelagic longline fishing community. Working with commercial fishing organizations such as the Blue Water Fishermen's Association (BWFA), and through the APs and public comment process, NMFS has been able to learn more about the regional pelagic longline sectors. In this rulemaking, NMFS has made full use of the pelagic logbook and dealer data which are provided by the longline vessel operators and dealers. In addition, NMFS uses observer data as a source of information about this fishery. Although these databases provide information on when, where, and how these vessels fish and the productivity of their fishing trips, there is a general lack of data on social and economic aspects of the pelagic longline fishery. In an attempt to address these shortcomings, NMFS initiated the voluntary economic add-on to the trip summary form in 1996. This form provides information on fishing costs, which are coupled with landings data and average prices to estimate net returns. The form also provides insight into crew size and crew sharing arrangements. NMFS has proposed making this add-on mandatory for selected vessels, and may implement this in the near future for all vessels, including recreational vessels.

At public hearings and in written comments to the agency, members of the various pelagic longline fishing communities have relayed to NMFS their perception that they have been the focus of various campaigns intent on eliminating or reducing pelagic longline fishing in U.S. fisheries. There have been postcard campaigns calling on NMFS to ban longlines in the U.S. EEZ, and the "Give Swordfish a Break" campaign calling on consumers to boycott north Atlantic swordfish. Most of these campaigns are based on concerns about bycatch in the pelagic longline fishery as well as the status of north Atlantic swordfish.

As noted in Section 7, Appendix B, and other sections of the FSEIS, the north Atlantic swordfish stock has stabilized and even shows signs of rebuilding; much of this is due to efforts of the U.S. delegation at ICCAT to pursue reduced quotas and rebuilding programs - efforts which were supported by some U.S. commercial fishing industry representatives. Further, NMFS believes that it is possible to address bycatch in the pelagic longline fishery without eliminating the fishery. Indeed, many commercial groups have begun to work outside of the regulatory process in order to reduce bycatch and user conflicts with recreational fishermen. The BWFA is working with several recreational fishing organizations and with Congress to support time/area closures that are linked to a permit buyout system.

However, NMFS also recognizes that the pelagic longline fishery, along with other commercial and recreational fisheries, has bycatch and incidental catch. As described in Section 1, the purpose of the regulations in this document is to:

- (1) Maximize the reduction in finfish bycatch;
- (2) Minimize the reduction in the target catch of swordfish and other species;
- (3) Consider impacts on the incidental catch of other species to minimize or reduce incidental catch levels; and,
- (4) Optimize the survival of bycatch and incidental catch species.

Often, it is the economic impacts (described in Sections 7 and 8 of this document) which drive the changes in fishing communities. However, social impacts can occur without any associated economic impacts. This section describes social impacts that may occur in fishing communities as a result of these final actions.

Because some pelagic longline vessels and their crew are “migratory,” following the fish up and down the coast, and other pelagic longline vessels and their crew generally stay in one location (e.g., some of the smaller vessels), it is difficult to estimate the impacts of time/area closures on pelagic longline vessels and their communities. For this reason, the impacts are discussed qualitatively, not quantitatively.

9.1 Community Profiles

NS 8 defines a fishing community as

“...a community that is substantially dependent upon or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, crew, and fish processors that are based in such communities.”

Chapter 9 of the HMS FMP contains a full description of many fishing communities that participate in HMS fisheries. These descriptions include the population, level of education, sources of employment, per capita income, and the fishing sectors in the community. The communities described include Gloucester, MA; New Bedford, MA; Barnegat Light, NJ; Brielle, NJ; Hatteras, NC; Wanchese, NC; Islamorada, FL; Pompano Beach, FL; Madeira Beach, FL; Panama City, FL; Dulac, LA; and Venice, LA.

Of these communities, the HMS FMP points out that New Bedford, Barnegat Light, Wanchese, Islamorada, Pompano Beach, Madeira Beach, Panama City, Dulac, and Venice have sectors that rely on fishing with pelagic longline gear. According to Wilson *et al.* (1998), some vessels in Barnegat Light are trying to convert to other fishing gears. It is possible that this conversion effort may increase if many fishermen relocate to the Barnegat Light area. Wilson *et al.* (1998) also found that many pelagic longline fishermen in Wanchese had already switched out of fishing and moved into other employment such as carpentry, building, and charter/headboat fishing. It is possible that this trend could continue as a result of the final actions of these regulations. In Islamorada, Wilson *et al.* (1998) found that vessels had a limited range and that some captains were already seeking employment in the Bahamas, South Africa, and South America. As with

Islamorada, Pompano Beach is experiencing an increasing number of recreational fishing vessels that compete with pelagic longline vessels. The community at Madeira Beach is composed of mostly pelagic longline vessels and most of these have multiple permits. Wilson *et al.* (1998) found that alternative employment in the oil industry and agriculture does exist for unemployed fishermen in Dulac and Venice. Recreational fishing is an important sector of all the fishing communities described in the HMS FMP.

9.2 Possible Social Impacts of the Time/Area Closure Final Actions

Figures 9.1 through 9.8 show the location of the business addresses of directed and incidental swordfish limited access permit holders and dealers in relation to the final closed time/area closures. These maps indicate several “hot-spots” of pelagic longline fishermen and dealers. These spots are located throughout NJ through MA, the coast of NC, the east coast of FL, two areas on the west coast of FL, the east part of LA, and the north of TX.

In 1998, there were 37 limited access permit holders who reported landings taken in the DeSoto Canyon area. These 37 vessels that reported landings from the DeSoto Canyon area, have business addresses in LA, FL, and AL. In addition, there were 25 seafood dealers who bought fish from limited access permit holders who fished in the area. These dealers who purchased fish from these vessels have business addresses in FL, TX, LA, and MA. Also in 1998, there were 78 swordfish limited access permit holders who reported landings taken in the Charleston Bump and East Florida Coast areas. These 78 vessels that reported landings from these areas, have business addresses in FL, MD, NC, NJ, NY, RI, SC. There were also 43 seafood dealers who bought fish from limited access permit holders who fished in these areas. These dealers have business addresses in FL, MD, NC, NJ, NY, and SC. These data indicate that the possible community impacts of these regulations are not limited to commercial fishing communities adjacent to the closed areas.

Coastal communities in the states listed above tend to have a strong focus on the fishing industry; both fishing itself and seafood sales. The closures might have a significant economic effect on those vessel owners’ families, crew, dealers, and staff and therefore will likely have social and community impacts. The majority of the social and economic effects will probably be experienced by fishing communities in the above-mentioned states because these communities had participants who were fishing or handling fish from the closed areas. However, there are other fishing sectors that could continue to benefit these communities.

In general, both the DeSoto Canyon and the South Atlantic time/area closures could have significant social impacts on pelagic longline fishermen and related industries. The comments received mention that there are three basic alternatives for pelagic longline fishermen who currently fish in the closed areas under the final time/area actions. Pelagic longline fishermen (e.g., permit holders, captain, crew) and their families could relocate their homeports to the open areas in order to recoup their losses under the closure. Commercial fishermen provided comments suggesting that delaying implementation of the time/area closures could give

fishermen and their families the time needed to relocate and could alleviate some of the economic impacts. There is also a possibility that vessels with homeports close to the open areas could safely fish in those open areas. However, there are vessels, particularly the smaller vessels home-based in FL and SC, that may be unable to transfer effort to the open areas due to safety concerns. NMFS received a number of comments concerning the safety of these smaller vessels. In addition, although these vessels that have homeports near the perimeters of the closed areas would not need time to relocate, they would still likely have significant economic impacts if they need to spend more time at sea in order to reach the open waters. If this occurs, the captains and crew who live in these areas may be away from home more than under the status quo. Some pelagic longline fishermen may decide or may be forced to leave the fishery altogether as a result of the regulations in this document. Thus, the final closures could have three immediate impacts on fishing communities in the Gulf of Mexico and the South Atlantic Bight: 1) fishermen could spend more time away from home and their families, 2) fishermen could move from a community in the closed area to a community in the open area, or 3) fishermen could leave the fishery. If pelagic longline fishermen decide to move as a result of the final closures, communities outside, or near the edge of, the time/area closure might benefit. If pelagic longline fishermen move or leave the fishery, commercial communities within the closure areas could have substantial negative social impacts.

Dealers could also be affected by the final time/area closure. In some small towns, the seafood dealers may be a cornerstone of the pelagic longline community; a place to sell fish, socialize, and learn of new and upcoming fishing regulations. They are also a possible source of financial support, including loans and jobs, for family members. While dealers in the closed areas may continue to buy fish caught with pelagic longline gear under the closures, their costs would increase as they would have to transport fish back to their warehouses from ports farther away than usual. For example, a dealer in FL might choose to send a truck to NC in order to maintain contacts with fishing boats that used to land HMS in FL but now, because of the closure, land in ports farther north. While dealers and communities located inside or near the time/area closures (e.g., those in GA, FL, or SC) may suffer adverse impacts, dealers and communities outside the time/area closure, particularly next to communities adjacent to the closed areas (e.g., those in LA, NC, VA, MD, and NJ) may notice benefits if effort moves to those communities. NMFS has also received comments indicating that some dealers may decide to relocate to the open areas. This move could include moving staff, changing truck/handling infrastructures, changing or building new docks, finding new ice houses, etc. This could have negative social impacts on commercial communities in or near the closed areas and positive social impacts on commercial communities in the open areas.

NMFS does not have sufficient information on equipment suppliers (e.g., tackle shops, large equipment suppliers, welders, boat-builders, machine shops, etc.) to estimate what the impacts of a time/area closure may be on this sector. All play important roles in outfitting pelagic longline vessels for commercial fishing. These businesses may employ many or few people in a town. If the impacts of the time/area closure on fishermen and dealers are large, there could be similar large social and economic impacts on this sector. If these companies are large and supply fishing

vessels throughout the Atlantic basin, impacts are likely to be lessened.

Despite the possible adverse impacts of the final time/area closure, some fishing communities may not collapse if commercial pelagic longline fishermen move to other communities. Fishing communities in the closed areas could expand into other commercial fishing activities such as the bottom longline sector or could expand recreational fishing opportunities. For instance, the historic recreational swordfish fishery was based in the mid-Atlantic and Florida regions. As the swordfish stocks are rebuilt, it is likely (and in some cases is already happening) that recreational fishing could return to those regions. NMFS received a number of comments that indicate that recreational fishing participants spend large amounts of money in local fishing areas and may spend more money with time/area closures. Communities which may be impacted by the final time/area closures could be the ones that benefit the most once the swordfish stock is rebuilt. In addition, because the time/area closure in the Gulf of Mexico does not continue all the way into the coast, communities in FL and GA may feel both the benefits and costs of the time/area closures and may be inclined to expand activities to other fishing sectors. This type of expansion may put businesses and industries who are unable to expand out of business but, in the long term, may have added benefits for those who do expand as the fish stocks rebuild. Thus, although in certain areas the pelagic longline fishing part of the fishing community could cease to exist, it is possible that the entire fishing community could be maintained and even expand as the fish stocks are rebuilt.

NMFS received a number of comments that indicated communities in the mid-Atlantic Bight, particularly recreational communities, would also be negatively impacted and may experience increased user conflicts if all the vessels from the Charleston Bump and East Florida Coast areas move north. Although 52 of the 78 permit holders who reported landings from the Charleston Bump and East Florida Coast areas are located in FL and SC and may relocate north, 26 of them already live in the mid-Atlantic Bight. Also, some of the permit holders who currently live in FL may decide to move to the west side of FL or into the Caribbean instead of moving to the mid-Atlantic Bight. In addition, some of the charter/headboats currently operating in the mid-Atlantic Bight may decide to move south and thus alleviate some of the negative impacts of the South Atlantic closure.

Figure 9.1 The location of business addresses of directed swordfish limited access permit holders. Each circle represents one permit holder.

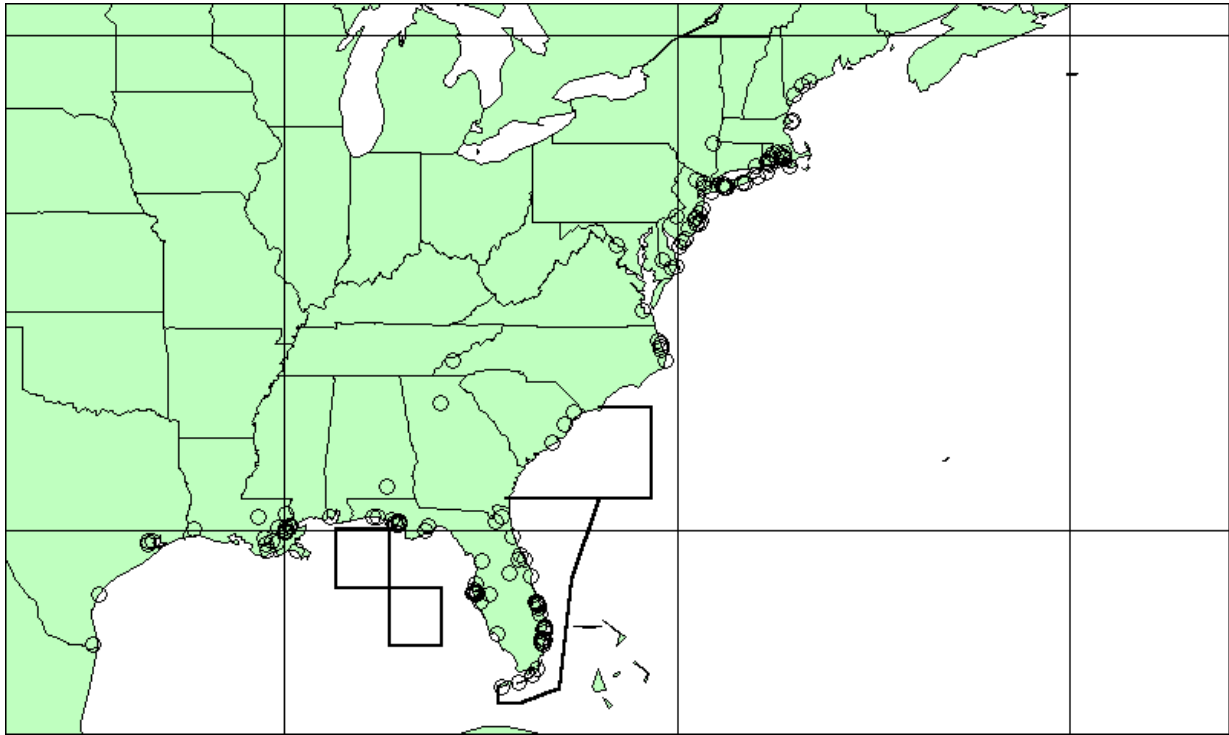


Figure 9.2 A close-up of the location of business addresses of directed swordfish limited access permit holders near the closed areas. Each circle represents one permit holder.

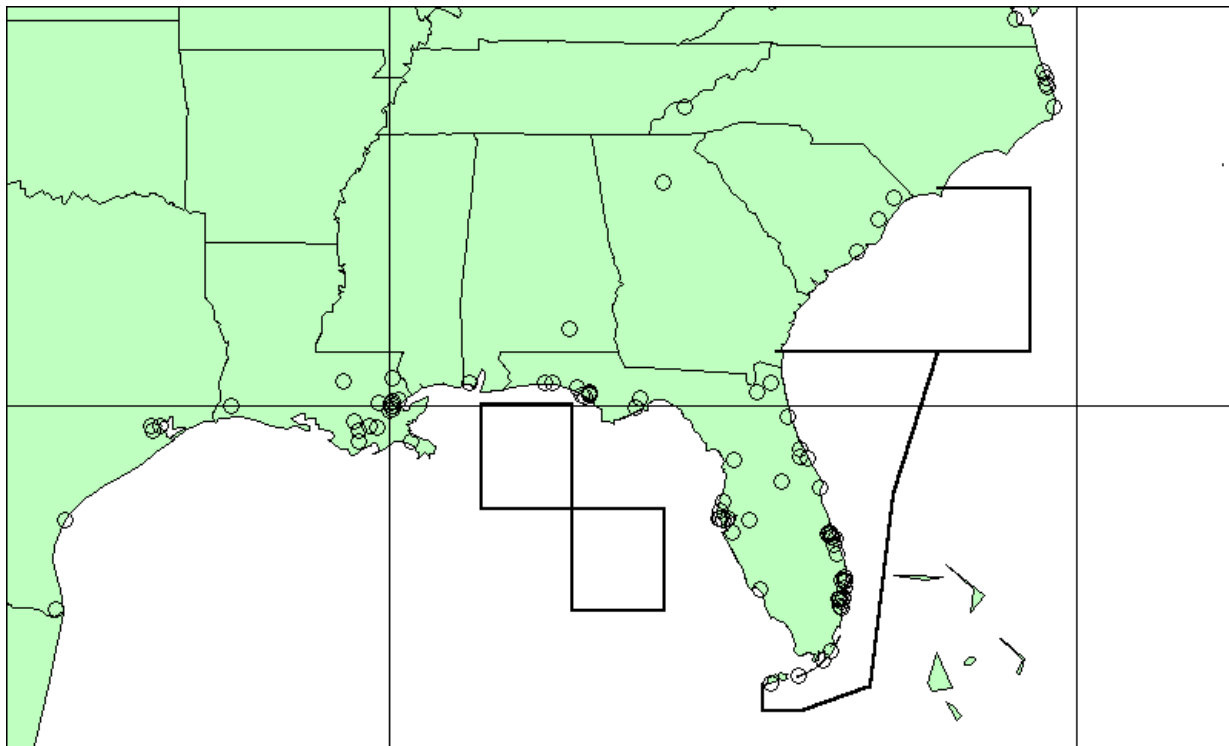


Figure 9.3 The location of the business addresses of incidental swordfish limited access permit holders. Each square represents one permit holder.

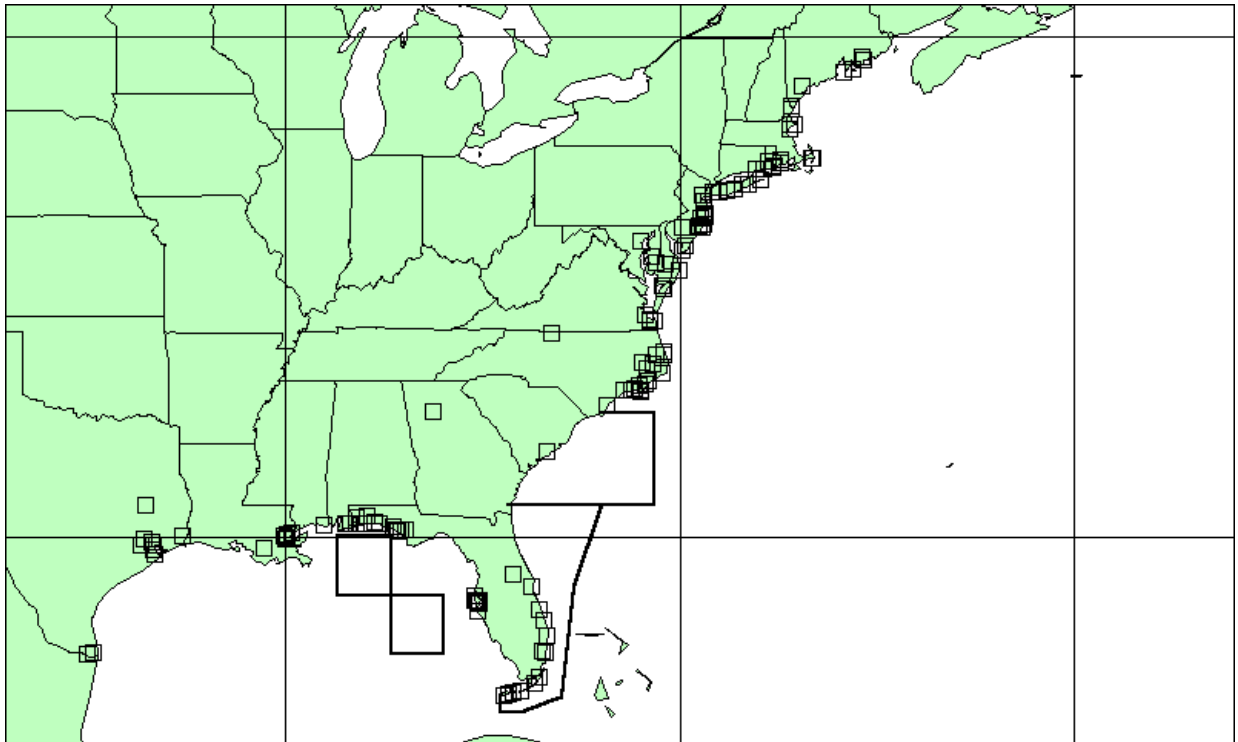


Figure 9.4 A close-up of the location of the business addresses of incidental swordfish limited access permit holders near the closed areas. Each square represents one permit holder.

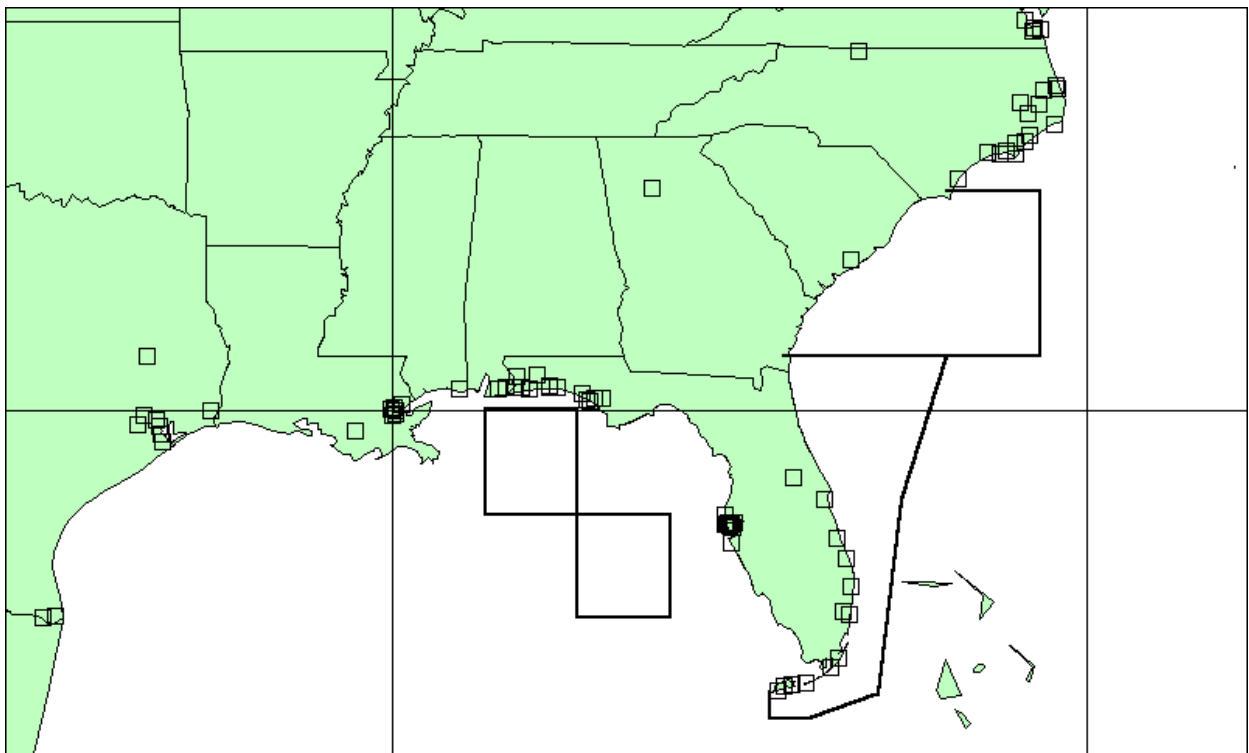


Figure 9.5 The location of the business addresses of all swordfish dealers.¹ Each star represents one permit holder.

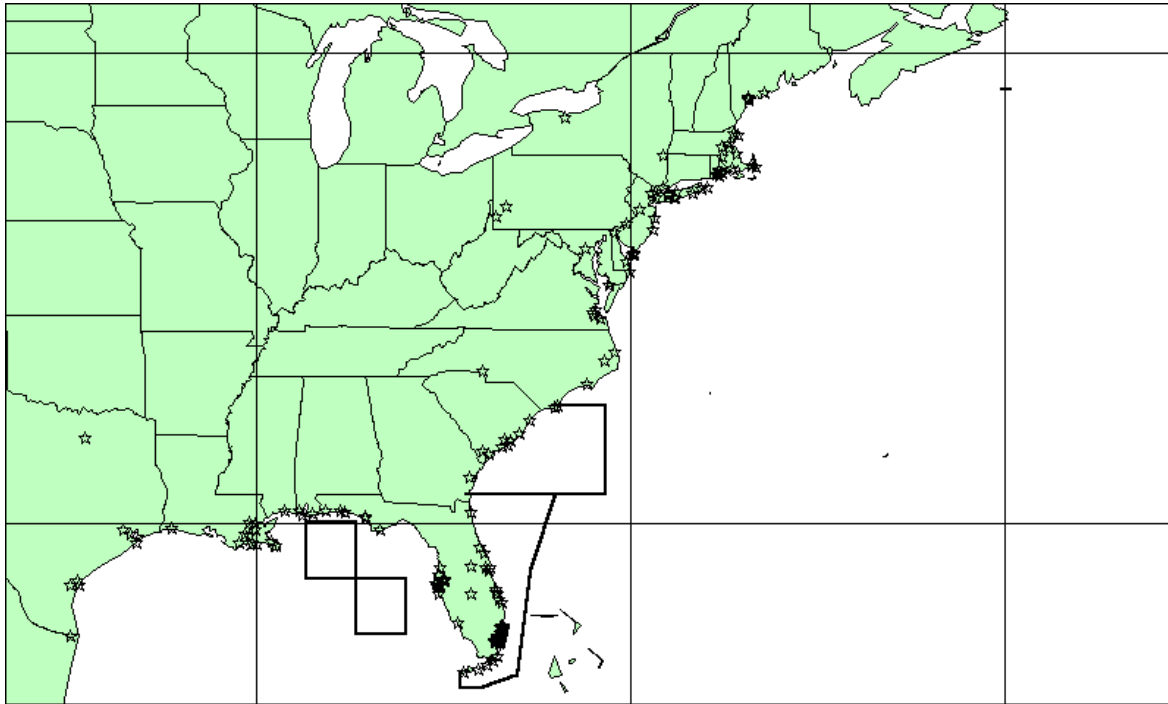
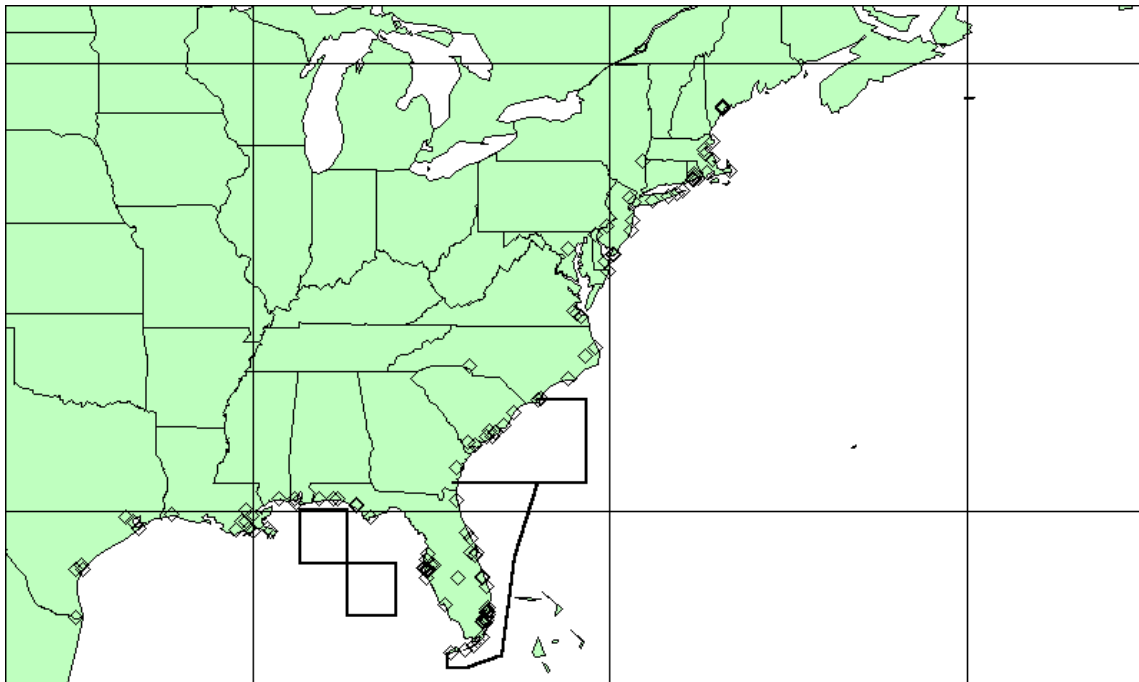


Figure 9.6 The location of business addresses of all shark dealers. Each diamond represents one permit holder.



¹ Unlike the FRFA, this map contains all dealers on the east coast of the United States who have a swordfish dealer permit, not just those who received fish from limited access permit holders.

Figure 9.7 The location of business addresses of all BAYS dealers. Each upside down triangle represents one permit holder.

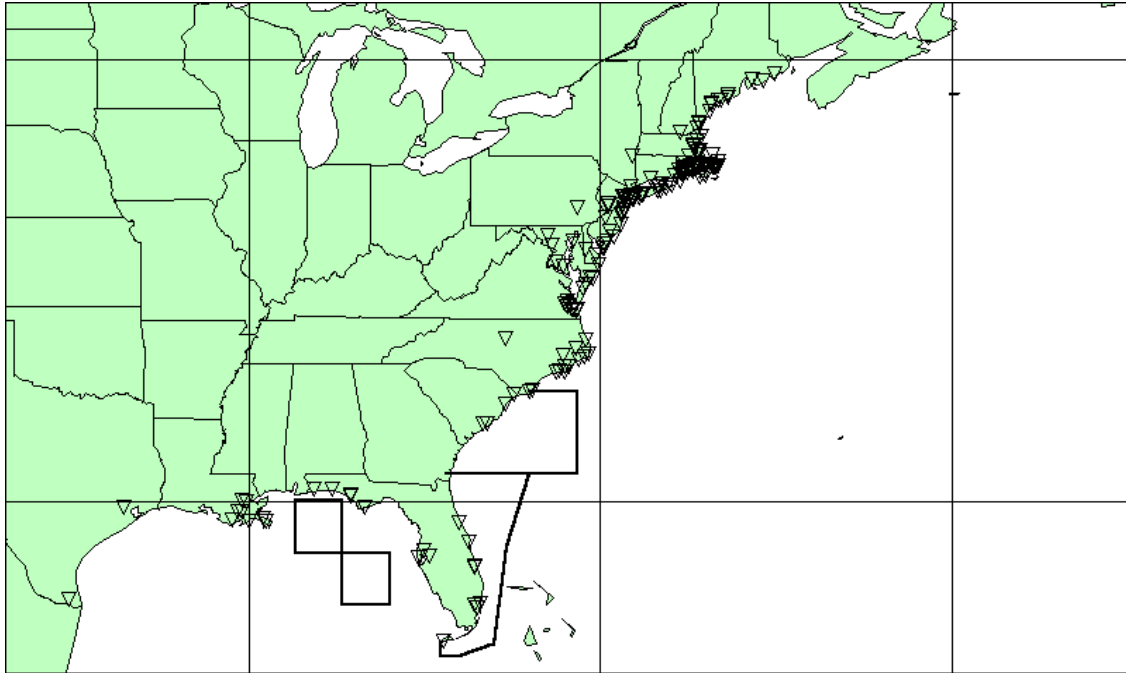
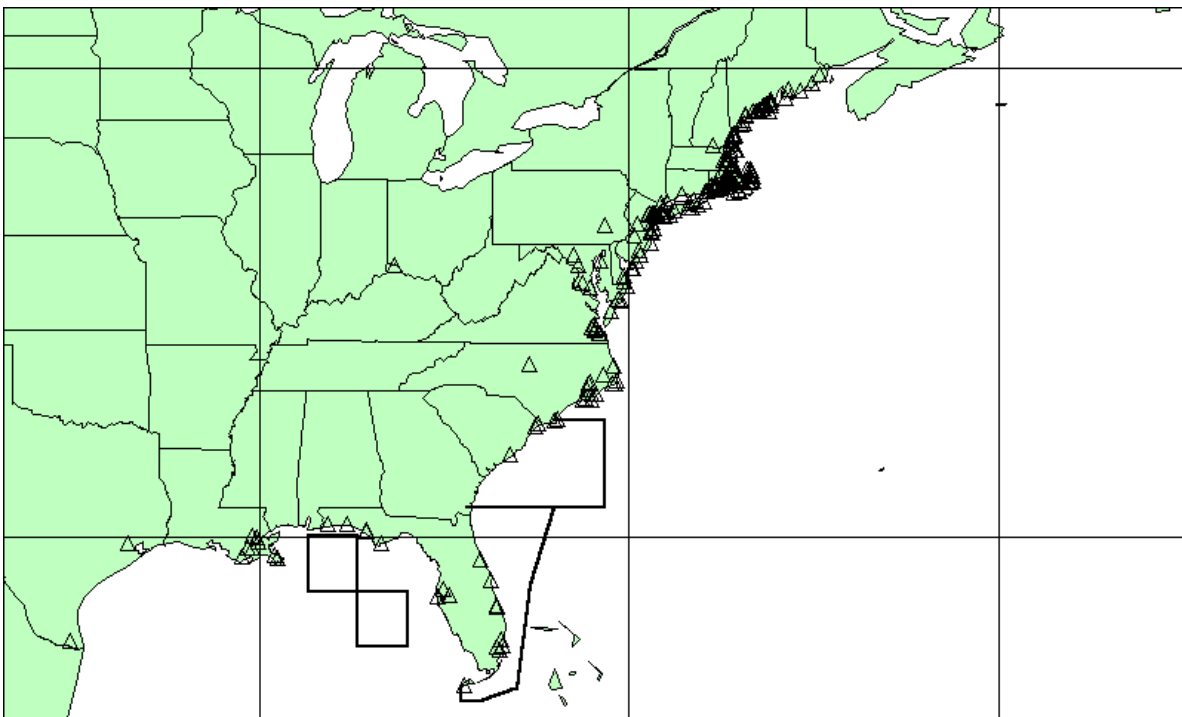


Figure 9.8 The location of business addresses of all BFT dealers. Each triangle represents one permit holder.



9.3 Possible Social Impacts of the Final Action to Prohibit Live Bait

The final action to prohibit live bait would likely affect the Vietnamese-American sector of fishing communities proportionally more than other communities because these fishermen appear to be the majority of those who use live bait. (Section 7 of this document describes how these fishermen use live bait.) These impacts might be viewed as significant if fishermen respond to the regulation by taking longer trips in order to catch more fish to pay for the frozen bait. However, time during trips is currently spent catching live bait and maintaining it in live tanks. Therefore, NMFS assumes the length of trips would not change and may decrease. However, labor costs would be transferred into the variable costs per trip, which include the purchase of dead bait and ice. Alternatively, some fishermen may decide to continue to fish for bait instead of buying dead bait. These fishermen would probably experience lower costs because they would no longer need to keep it alive. NMFS seeks to have more contact with this sector of communities in both LA and TX and has chosen a member of that community to serve on the HMS AP.

9.4 Possible Social Impacts of Delaying Implementation of the Time/Area Closures

NMFS received a number of comments that indicated the agency should delay implementation of the final regulations, particularly the time/area closures, in order to give commercial fishery participants a chance to relocate. NMFS agreed with these comments and will implement different parts of these regulations at different times. NMFS believes that these delayed implementation dates will give fishermen, dealers, processors, and others in the commercial and recreational fishing communities a chance to make some adjustments prior to the implementation of the regulations. As described in Section 8, delaying the time/area closures will give communities a chance to gradually change and explore options over the course of a few months and should minimize some of the social and economic impacts.

9.5 Environmental Justice

Executive Order 12898 requires agencies to identify and address disproportionately high and adverse environmental effects of its regulations on the activities of minority and low-income populations. In particular, the environmental effects of the regulations should not have a disproportionate effect on minority and low-income communities.

During the comment periods, NMFS heard that the time/area closures may disproportionately affect African-Americans in SC, Vietnamese-Americans, and low-income crew members. NMFS used 1990 census data to estimate the percent of the population in coastal counties of the states affected by the regulations that are minority groups and that are employed in farming, fishing, or forestry jobs. By looking at the coastal communities, NMFS assumes most of the people in these types of jobs are in the fishing industry, not the farming or forestry industries. The results are shown in Table 9.1 below. These data indicate that only a small percentage (1-2%) of the population in coastal communities consider themselves fishermen (NMFS, LA Pop. Data Center). State-wide, the percentage of fishermen is even lower (Table 9.2 shows state

population levels). According to U.S. Census data (U.S. Census Bureau, 1999), in 1998, only 3 percent of all males and less than 1 percent of all females in the United States older than 15 were employed in farming, forestry, or fishing related jobs.

NMFS believes that the most significant economic and social effects will be felt in communities in the closures and will not fall disproportionately on minority or low-income populations. While some fishermen and related industries may face significant reductions in revenues and may be forced to cease operations if alternative sources of fishing income are not available or feasible, the economic effects do not fall disproportionately on minority or low income communities. Further, NMFS believes that the impacts are unavoidable in order to reduce bycatch and bycatch mortality in the pelagic longline fishery. However, in an attempt to minimize the social and economic impacts that fishermen and related industries may suffer as a result of these regulations, NMFS has reduced the size of the closed areas, shortened the closed times, and prohibited live bait. These changes and any impacts are described in Sections 7, 8, and 9 of this document.

Table 9.1 A summary of census data of coastal communities near the affected states. Source: NMFS, LA Pop. Data Center.

State	Number of people in coastal communities employed in farming, fishing, or forestry jobs	Number of Blacks*	Number of Latinos*	Number of Whites*
Texas	15,111 (1% of the state population)	152,939	807,144	1,902,744
Louisiana	9,797 (<1%)	200,800	41,877	903,097
Mississippi	2,578 (<1%)	58,946	4,687	246,557
Alabama	4,051 (<1%)	130,390	4,353	339,297
Florida West Coast	32,830 (1%)	221,333	93,447	2,616,225
Florida East Coast	61,930 (1%)	918,463	1,227,028	4,838,827
Georgia	2,172 (<1%)	108,290	4,000	204,867
South Carolina	6,516 (1%)	203,815	9,543	484,771
North Carolina	12,458 (2%)	111,971	10,224	410,960

*Terms used to denote race are those defined in the source database.

Table 9.2 Population estimates for the States on the Atlantic and Gulf of Mexico by race and Hispanic origin: July 1, 1998. Source: U.S. Census Bureau

State	Total Population	Total White*	Total White Hispanic*	Total Black*
Alabama	4,351,999	3,176,917	36,402	1,132,196
Connecticut	3,274,069	2,881,916	237,809	303,721
Delaware	743,603	581,585	22,050	144,380
Florida	14,915,980	12,318,852	2,080,097	2,267,753
Georgia	7,642,207	5,293,151	193,129	2,181,455
Louisiana	4,368,967	2,887,280	100,073	1,407,201

State	Total Population	Total White*	Total White Hispanic*	Total Black*
Maine	1,244,250	1,223,349	8,064	6,321
Maryland	5,134,808	3,487,139	158,412	1,428,207
Massachusetts	6,147,132	5,514,476	297,924	394,645
Mississippi	2,752,092	1,719,480	18,431	1,003,175
New Hampshire	1,185,048	1,160,083	16,297	8,504
New Jersey	8,115,011	6,452,085	866,002	1,188,236
New York	18,175,301	13,885,138	1,989,939	3,219,676
North Carolina	7,546,493	5,684,204	139,094	1,665,273
Pennsylvania	12,001,451	10,619,209	264,895	1,166,151
Rhode Island	988,480	910,880	52,230	49,476
South Carolina	3,835,962	2,645,077	41,773	1,147,239
Texas	19,759,614	16,677,516	5,639,907	2,430,061
Virginia	6,791,345	5,162,888	219,652	1,362,617
Total U.S.	270,298,524	223,000,729	27,561,226	34,430,569

*Terms used to denote race are those defined in the source database.

9.6 Conclusion

The final actions for a time/area closure in the Charleston Bump, East Florida Coast, and in the DeSoto Canyon area could have significant social impacts. The impacts of the time/area closures may vary depending on the location of the community. These impacts could be negative for commercial fishing communities within the time/area closure area (e.g., those in FL or SC), could be positive for commercial fishing communities near the edges of the time/area closure (e.g., those in east LA or NC), or could be negligible for commercial fishing communities farther away (e.g., those in MA). In the short term, the final action for time/area closures could cause the pelagic longline sector of some fishing communities to collapse and result in the other sectors (e.g., recreational or other commercial sectors) expanding. However, NMFS believes that in the long term, the pelagic longline sector of all communities could be negatively affected under the status quo alternative. As the stock rebuilds, these communities may benefit. In addition, NMFS hopes that delaying implementation of the final actions may help minimize some of the impacts. The final action of prohibiting live bait may also have some negative social impacts, particularly on the Vietnamese American community. However, NMFS believes that this final action will have fewer negative impacts to this minority community than the proposed closure of the western Gulf of Mexico. In general, NMFS does not believe that the regulations will fall disproportionately on minority or low-income populations. While the other alternatives considered could minimize the social impacts, these alternatives may not reduce bycatch or bycatch mortality as much as the final actions and therefore may not be consistent with NS 9 nor would they be as much help in rebuilding the stock.

9.0	SOCIAL IMPACT AND ENVIRONMENTAL JUSTICE ASSESSMENTS	9-1
9.1	Community Profiles	9-2
9.2	Possible Social Impacts of the Time/Area Closure Final Actions	9-3
9.3	Possible Social Impacts of the Final Action to Prohibit Live Bait	9-10
9.4	Possible Social Impacts of Delaying Implementation of the Time/Area Closures	9-10
9.5	Environmental Justice	9-10
9.6	Conclusion	9-12
Figure 9.1	The location of business addresses of directed swordfish limited access permit holders.	9-6
Figure 9.2	A close-up of the location of business addresses of directed swordfish limited access permit holders near the closed areas.	9-6
Figure 9.3	The location of the business addresses of incidental swordfish limited access permit holders.	9-7
Figure 9.4	A close-up of the location of the business addresses of incidental swordfish limited access permit holders near the closed areas.	9-7
Figure 9.5	The location of the business addresses of all swordfish dealers.	9-8
Figure 9.6	The location of business addresses of all shark dealers.	9-8
Figure 9.7	The location of business addresses of all BAYS dealers.	9-9
Figure 9.8	The location of business addresses of all BFT dealers.	9-9
Table 9.1	A summary of census data of coastal communities near the affected states.	9-11
Table 9.2	Population estimates for the States on the Atlantic and Gulf of Mexico by race and Hispanic origin: July 1, 1998.	9-11