6. COMMUNITY AND SOCIAL UPDATE

According to National Standard 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.

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, 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 a 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.

The information used in the 1999 HMS FMP and the 1999 Billfish FMP Amendment was obtained through a contract 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 HMS FMP and the 1999 Billfish FMP 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 HMS FMP and Chapter 7 of the 1999 Billfish FMP 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 and, specifically, to determine if the 1999 HMS FMP had a negative social impact on the communities dependent upon HMS. The 2005 report provided a brief overview and examination of changes in social and economic structures of communities which land

HMS. The analysis of change since the 1999 HMS FMP regulations were implemented was based on demographics, landings information, and informal interviews with individuals from three different communities. Some of the report's findings are incorporated into the community profiles in Chapter 9 of the Consolidated HMS FMP.

6.2 Summary of Social Data and Information for Consolidated HMS FMP

The Consolidated HMS FMP consolidated all of the community profiles from previous HMS management plans or amendments and updated the community information, where possible. To ensure continuity with the 1999 HMS FMP and previous amendments, if a community was selected and described as being involved with an HMS fishery, the same community was included in the 2006 assessment. The communities profiled were originally selected due to the proportion of HMS landings, the relationship between the geographic communities and the fishing fleets, the existence of other community studies, and input from the HMS and Billfish Advisory Panels. The communities selected for detailed study were Gloucester and New Bedford, Massachusetts; Barnegat Light and Brielle, New Jersey; Wanchese, and Hatteras Township, North Carolina; Pompano Beach, Fort Pierce, Madeira Beach, Panama City Beach, and Islamorada, Florida; Boothville/Venice and Dulac, Louisiana; and Arecibo, Puerto Rico. These communities are not intended to be an exhaustive list of every HMS-related community in the United States; rather the objective was to give a broad perspective of representative areas.

The demographic profiles in the Consolidated HMS FMP have been modified to include the same baseline information for each community profiled. As a result, most of the tables include more information than portrayed in the 1999 HMS FMP and its amendments. The demographic tables still use both 1990 and 2000 Bureau of the Census data for comparative purposes. The descriptive community profiles include the same information provided by the Wilson *et al.,* (1998) and Kirkley (2005) analyses with some new information provided by Impact Assessment, Inc (2004) on the Gulf of Mexico communities. Unlike the Wilson *et al.,* (1998) study used in the 1999 HMS FMP, it was not possible to undertake field research for this assessment.

The Consolidated HMS FMP also reviewed the HMS permit databases to incorporate information about residence. This information was also used to identify additional HMS-related fishing communities that should be profiled in the future. Six GIS maps were generated to identify the communities where angler, charter/headboat, HMS dealers (tunas, shark, and swordfish combined), commercial tuna (all gear categories combined), directed and incidental shark, and swordfish (directed, incidental, and handgear combined) permit holders reside. In past community profile and social impact analyses, it was difficult to identify where recreational HMS fishermen were located because no data were available for the number of recreational fishermen, as well as recreational landings by community. Previous social impact assessments report on charter fishing operations, fishing tournaments, and related activities to identify the scope of recreational fishing for each of the communities described. The information provided

by the HMS permit databases should facilitate the identification of recreational HMS communities that should be profiled in the future.

6.3 Summary of New Social and Economic Data Available

The following reports were published in 2006:

- Agar, Juan and Brent Stoffle. 2006. Profiling Fishing Communities in St. Croix and the U.S. Virgin Islands.
- Boyd, Heather and Anthony Charles. 2006. Creating Community-based Indicators to Monitor sustainability of Local Fisheries. Ocean & Coastal Management, 49:237-258.
- Griffith, David, Manuel Valdés Pizzini and Carlos García Quijano. 2006. Entangled Communities: Socioeconomic Profiles of Fishers, their Communities, and their Responses to Marine Protective Measures in Puerto Rico.
- Impact Assessment, Inc. 2006a. Preliminary Assessment of the Impacts of Hurricane Katrina on Gulf of Mexico Coastal Fishing Communities. Final Technical Report submitted to U. S. Department Of Commerce NOAA Fisheries, Southeast Regional Office St. Petersburg, Florida. Contract # WC133F-06-CN-0003
- Impact Assessment, Inc. 2006b. Identifying Communities Associated with the Fishing Industry in Alabama and Mississippi. U. S. Department Of Commerce NOAA Fisheries, Southeast Regional Office St. Petersburg, Florida. Contract WC133F-03-SE-0603.
- Jepson, Michael. 2006. A Cultural Sea Change. Forum Magazine. A Florida Humanities Council Publication. Summer.
- Jepson, Michael and Steve Jacob. 2006. Social Indicators and Measurements of Vulnerability for Gulf Coast Fishing Communities. NAPA Bulletin 28 (In Press)
- NOAA Fisheries. (2006). Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan.
- SAFMC. 2006. Final Amendment 13c to the Snapper Grouper Fishery Management Plan. South Atlantic Fishery Management Council, Charleston, SC .
- Sepez, J., B.D. Tilt, C.L. Package, H.M. Lazrus and I. Vaccaro. 2006. Community Profiles for North Pacific Fisheries – Alaska. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-AFSC-160.
- Walker, Bobbi, Robert Zales and Betty Rockstall. 2006. Charter Boat Fleet In Peril: Losses to the Gulf of Mexico Charter Fleet From Hurricane Storms during 2005. National Association of Charterboat Operators, Orange Beach, Alabama.
- WPFMC. 2006. Amendment 14 to the Fisheries Management Plan for Pelagic Fisheries of the Western Pacific. Western Pacific Fishery Management Council. Honolulu, Hawaii.

6.4 HMS Community Profile Needs

Since the publication of the Consolidated HMS FMP, a contract has been underway to assess the current level of social science data available for HMS fishing communities and to determine which communities should be priorities for additional profiling. A comprehensive literature review has been conducted to define fishing communities and identify research in other fisheries that may also be relevant for HMS fishing communities. Results from this literature review yielded a list of communities recently profiled, when they were profiled, and suggested communities for future profiling.

After consideration of previous methods used, our contractor employed a recent methodology by Sepez *et al*. (2005). In their paper, they utilized a method with a variety of data including ratios of permits by population for each community. Permit data for 2006 was grouped into seven classes of permits: angling permits, charter permits, tuna dealer, general, longline, swordfish, and shark. Each type of permit was then ranked by the ratio of the number of permits (by type) to the community population (U.S. Census 2000 population data for each community). Communities that did not meet the mean for number of permits (by type) were not further considered. This yielded a list of 25 communities. This list was then further refined by prioritizing the list according to how recently these communities had been profiled.

The prioritized list below contains all of the communities for which appraisals will be conducted under the contract:

- Beaufort, NC
- Atlantic Beach, NC
- Wakefield, RI
- Montauk, NY
- Cape May, NJ
- Ocean City, MD
- Port Salerno, FL
- Morehead City, NC
- Destin, FL
- Apalachicola, FL
- Port St. Joe, FL
- Orange Beach, AL
- Grand Isle, LA
- Port Aransas, TX
- Freeport, TX
- Barnegat Light, NJ
- Brielle, NJ
- Wanchese, NC

- Hatteras Village, NC
- Islamorada, FL
- Madeira Beach, FL
- New Bedford, MA
- Gloucester, MA
- Dulac, LA
- Venice LA

Updates to current profiles will be completed through the use of phone interviews. Key informants within each of those communities should provide sufficient updated rapid appraisals with a focus on HMS activities. Not listed are the communities of Puerto Rico and the U.S. Virgin Islands. These communities have received little attention and would benefit from rapid appraisals, although due to incomplete data from these regions and the time constraints of this project, it is unlikely that these communities will be profiled in this current project. The upcoming report, however, will provide a brief discussion of HMS activities and relevant social aspects of the U.S. Virgin Islands.

References for Section 6:

Kirkley, J.E. 2005. The Communities of the Atlantic Highly Migratory Species (HMS) Fishery: An Overview of Change Associated with the HMS Fishery Management Plan. Department of Coastal and Ocean Policy, School of Marine Science, Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, Virginia. (NOAA-NMFS-HMS contract report).

Impact Assessment, Inc. 2004. Identifying Communities Associated with the Fishing Industry in Louisiana. La Jolla, California. (NOAA-NMFS-Contract WC133F-02-SE-0297).

Interorganizational Committee, 1994. Guidelines and Principles for Social Impact Assessment. Seattle, WA: U.S. Department of Commerce, National Marine Fisheries Service (NOAA-NMFS-TM-F/SPO-16)

NMFS, 1999a. Final Fishery Management Plan for Atlantic Tunas, Swordfish and Sharks. Silver Spring, MD: U.S. Department of Commerce, National Marine Fisheries Services, Highly Migratory Species Management Division.

NMFS, 1999b. Amendment 1 to the Atlantic Billfish Fishery Management Plan. Silver Spring, MD. U.S. Department of Commerce, National Marine Fisheries Service, Highly Migratory Species Management Division.

NMFS, 2001. NMFS Operational Guidelines – Fishery Management Process: Appendix 2(g)**:** Guidelines for Assessment of the Social Impact of Fishery Management Actions. Silver Spring, MD: U.S. Department of Commerce, National Marine Fisheries Service. NMFS, 2003. Final Amendment 1 to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks. Silver Spring, MD: U.S. Department of Commerce, National Marine Fisheries Service.

Sepez, J., B.D. Tilt, C.L. Package, H.M. Lazrus and I. Vaccaro. 2005. Community Profiles for North Pacific Fisheries – Alaska. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-AFSC-160.

Wilson, D., B.J. McCay, D. Estler, M. Perez-Lugo, J. LaMargue, S. Seminski, and A. Tomczuk. 1998. Social and Cultural Impact Assessment of the Highly Migratory Species Fishery Management Plan and the Amendment to the Atlantic Billfish Fisheries Management Plan. The Ecopolicy Center for Agriculture, Environmental, and Resource Issues, New Jersey Agricultural Experiment Station, Cook College, Rutgers, the State University of New Jersey (NOAA-NMFS-HMS contract report).