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## 10. OUTLOOK

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The year 1999 was eventful for HMS. The management measures from the HMS FMP and the Billfish Amendment are still in the process of being implemented and evaluated. New SCRS information, new ICCAT recommendations, and other recently released studies need to be recognized and incorporated, consistent with National Standard 2. This section reviews some of the key challenges related to current management and those that NMFS anticipates addressing in the near future. It is also a means of introducing some of the issues that will need to be addressed at the February 2000 HMS and Billfish Advisory Panel meeting. As the SAFE report is intended to provide information to help develop and evaluate regulatory adjustments, an outlook on the future of HMS fisheries is both valuable and necessary.

### 10.1 Outlook by Species

#### *Swordfish*

The 1999 SCRS stock assessment on North and South Atlantic swordfish was somewhat optimistic. Results indicated a higher than expected number of young swordfish in the North Atlantic stock; a sign of possible rebuilding. However, underreporting by member nations and the non-reporting of harvests from illegal, unreported, and unregulated (IUU) fishing vessels may lead to artificially low catch levels. ICCAT addressed the activities of these vessels in a 1999 resolution calling for further actions against IUU fishing activities by large scale longline vessels. The South Atlantic swordfish stock appears to be stable which provides a positive outlook for the future if harvests are controlled.

The positive outlook provided by the 1999 swordfish stock assessment spurred the adoption of a 10-year rebuilding program at ICCAT. A reduction in quotas sets the stage for long-term sustainable fisheries Atlantic-wide. The mortality of small swordfish is being addressed through proposed time/area closures in the United States, accounting for dead discards of small swordfish as part of the total allowable catch, and the ICCAT resolution to examine possible areas of small fish concentration *outside* the U.S. EEZ. There is also the possibility of other bycatch reduction measures such as gear restrictions. In 1999, the ICCAT Advisory Committee examined the issue of the effectiveness of the minimum size for swordfish. Reductions in the mortality of small swordfish may yield significant long-term gains in yield (SCRS, 1988).

In terms of addressing IUU vessels and other vessels (belonging to both non-Contracting and Contracting Parties), ICCAT took important steps in 1999 to encourage all countries to report harvests of ICCAT-regulated species. The United States will propose to implement the 1999 ICCAT recommendation that prohibits imports of swordfish and tunas from non-compliant countries. Collection of swordfish import data by the United States will prove to be an important

tool in the future to identify countries that are fishing in such a manner that diminishes the effectiveness of ICCAT conservation and management measures.

Beginning in 1998, the conservation of swordfish became an issue of heightened public consideration through campaigns such as “Give Swordfish a Break”, which promote the boycotting of swordfish until a rebuilding program is in place. Fish Unlimited has recently launched a campaign to “Save Our Swordfish” (S.O.S.), as has the Coastal Conservation Association of North Carolina (Project S.E.A.). The effects of these programs aimed at reducing consumer demand have yet to be determined. However, the relative success of the campaigns may dampen domestic swordfish markets.

It appears as though swordfish are becoming more available to rod and reel fishermen on the east coast of the United States and that this recreational fishery may experience additional popularity in the future. The 1999 requirement of swordfish handgear permits and the growth of the swordfish stock (both in number of fish and size of fish) may result in commercial handgear fishermen landing a larger proportion of the annual North Atlantic swordfish quota. In the future, NMFS may need to revise the way that the annual swordfish quota is distributed between the directed fishery (commercial handgear and longline fishermen with directed permits) and the incidental fishery (recreational landings and commercial landings by fishermen who hold incidental permits).

### *Tunas*

This year marked the first year of the 20-year rebuilding program for west Atlantic bluefin tuna. Although the status of the stock was not assessed by the SCRS in 1999, a new assessment is scheduled for the fall of 2000. Important issues that remain on the forefront of bluefin tuna conservation and management include bycatch, recreational landings monitoring, spotter aircraft use, and international compliance with ICCAT recommendations. Limited access in the bluefin tuna fishery, as well as the other Atlantic tunas fisheries, is also a mechanism being considered to address overcapitalized, and in some cases, overfished, fisheries. The ongoing archival and pop-up tagging research programs are expected to continue collecting and analyzing information about bluefin tuna stock structure and may prompt additional management concerns. Other important research with potential management implications include an assessment of the stock structure of bluefin tuna through otolith analysis and age-at-maturity studies.

Management and conservation issues of concern for other Atlantic tunas involve the overfished status of Atlantic bigeye tuna and north Atlantic albacore. Although ICCAT did adopt a resolution sponsored by the United States requesting the SCRS to develop recovery scenarios for northern albacore and extended the time/area closure in the Gulf of Guinea to help reduce catches of juvenile bigeye and yellowfin tuna, no significant actions were taken by ICCAT in 1999 to address the overfished status of these species. As part of the HMS management process, NMFS is considering the development of a rebuilding plan for North Atlantic albacore tuna. In

addition, a series of public workshops on the rebuilding of bigeye tuna is being considered in order to build momentum for conservation measures that may be introduced at the next ICCAT meeting. These issues, as well as those mentioned for bluefin tuna, may all be topics for discussion at the February 2000 HMS Advisory Panel meeting. Assessments for Atlantic yellowfin tuna and North and South Atlantic albacore tuna are planned for summer and fall of 2000, respectively.

### *Billfish*

The management measures in the Billfish Amendment were designed to meet the 1997 ICCAT recommendation to reduce Atlantic blue and white marlin landings by at least 25 percent, as well as work towards reducing levels of overfishing and rebuilding overfished Atlantic billfish resources. Actions involved size limits, bycatch reduction measures, possession and retention limits, additional monitoring, permitting and reporting, and extension of the management unit and management authority. Some of these measures have yet to be implemented and it is too early to determine the impact of others. However, progress has been made in several areas.

Tournament registration and reporting requirements were implemented on July 1, 1999. During 1999, approximately 150 tournaments involving billfish were registered with NMFS, a substantial increase from the 98 tournaments registered in 1998. Mandatory registration should result in more effective tournament monitoring and additional catch data. As in 1998, the SEFSC selected 100 percent of these tournaments for reporting in 1999. Compilation of 1999 data is currently underway.

Outreach programs on the methods and benefits of releasing Atlantic billfish alive have yet to be implemented. Members of HMS staff recently attended a Catch and Release Symposium where valuable material on proper handling, tagging, measuring, and release techniques, as well as the effectiveness of various gear configurations (e.g., circle hooks), was presented. The information obtained at this symposium could be incorporated in future programs and management alternatives. NMFS is currently exploring external funding sources and partnerships with state and private organizations in order to extend public outreach efforts and further enhance post-release survival rates of Atlantic billfish.

The SCRS is scheduled to meet during July 2000 in Miami, FL for the next stock assessment of Atlantic blue marlin and white marlin. The next assessment of west Atlantic sailfish is scheduled for 2001. There was some concern expressed at the 1998 SCRS meeting over the incomplete reporting of Atlantic marlin and sailfish landings. At the 2000 ICCAT meeting in Morocco, U.S. delegates will have their first attempt since publication of the Billfish Amendment to work towards achieving a ten-year rebuilding program for these species. NMFS will work with ICCAT members to develop rebuilding programs that meet the standards of the Magnuson-Stevens Act, including an appropriate rebuilding time period, targets for recovery, fishing

mortality rate limits, and explicit interim milestones for recovery expressed in terms of measurable improvement of the stock.

### *Sharks*

The HMS FMP incorporated the most recent information on catches, catch rates, biological parameters, and stock size for Atlantic sharks, and included a rebuilding plan for the overfished large coastal sharks as well as precautionary management measures for small coastal and pelagic sharks. However, the outlook for Atlantic large coastal sharks at this time is uncertain. The 1998 SEW indicated that large coastal sharks continue to be overfished in terms of excessive fishing mortality rates and depleted stock biomass. Projections in the 1998 SEW indicate that continued fishing at pre-HMS FMP levels will result in LCS stock declines at approximately 13 percent annually. The HMS FMP contained numerous measures to stop overfishing of LCS and begin rebuilding. The current court injunction, which enjoins the implementation of several commercial fishing regulations, has allowed commercial fishing to continue at pre-HMS FMP levels, whereas recreational fishing management measures in the HMS FMP were implemented in July. In addition to the current inequity between commercial and recreational shark regulations, the mortality of LCS in commercial fisheries is in excess of that prescribed in HMS FMP rebuilding plan and will have to be accounted for in future stock assessments. The effects of this additional mortality on LCS is unknown at this time.

While current fishing mortality and stock abundance estimates for SCS indicate that these species are fully fished, a stock assessment has not been conducted since 1993 and recent trends in landings and fishing practices need to be analyzed. The management measures implemented in the HMS FMP should, consistent the precautionary approach, prevent further expansion of fishing mortality on these species until a stock assessment can be conducted. A small coastal shark survey may be conducted outside of NMFS subject to grant approval. Similarly, management measures for pelagic sharks were implemented to ensure that all sources of fishing mortality are accounted for and to limit expansion of fishing pressure until additional analyses can be conducted.

International efforts to conserve and manage sharks continue to gain momentum. The ICCAT Sub-committee on bycatch held a workshop to analyze pelagic shark catch rates. NMFS is continuing to develop a National Plan of Action for shark conservation and management, consistent with FAO guidelines and requirements. Additionally, two international workshops on pelagic sharks are scheduled for February, 2000. These efforts should contribute to the general awareness of the need for long-term, rational domestic and international management of all sharks.

## **10.2 Data and Monitoring Issues**

Improving data coordination is essential for successful HMS management. As fisheries resources become increasingly managed under quota systems, real time monitoring is critical. Failure to abide by the quota levels established by international agreement may result in penalties assessed against future U.S. harvests. In order for the United States to continue to serve as a leader in the conservation of these resources, the development and use of innovative techniques must receive proper attention and funding. The following is a short list of data management tools and techniques that may assist in HMS management:

- The development of streamlined systems that transcend the traditional regional structures of NMFS data collection, entry, and dissemination.
- Improvement in the coordination of data collection and organization among various components of the agency.
- Use of systems like AppNet to consolidate data and add to the rapid dispersal of information.
- Placement of summary data on the HMS web page.
- Placing data in consolidated Oracle tables.
- Improved tracking of dealer reports.
- Development of an external e-mail system in addition to the fax notice system.
- Resolution of the LPS status including a retrospective analysis of the existing system and the exploration of alternative methods to gather increasingly accurate data from the recreational components in the future.
- The use of electronic logbooks to facilitate reporting and data analysis.

NMFS is also developing a simple, user-friendly identification guide to commonly fished Atlantic highly migratory species. The manual is intended for use by fishermen, enforcement officers, and fishery samplers. Particularly for the wide variety of Atlantic sharks, identification down to the species level is difficult for many recreational and commercial fishermen. Disseminating these guides is expected to increase the quality of species-specific landing data, and compliment the observer, logbook, and dockside monitoring systems already in place.

### **10.3 Research Needs**

The Comprehensive Research and Monitoring Plan for Atlantic Highly Migratory Species (Appendix I) details current research underway as well as those studies that may directly benefit future HMS management.

#### **10.4 Conclusion**

The SAFE report is designed to not only summarize the current condition of the resource, but also address whether or not the fishery is operating properly under the mandates of the Magnuson-Stevens Fishery Conservation and Management Act and the Sustainable Fisheries Act. Through an annual appraisal of recent information, the SAFE report allows for a re-evaluation of management measures in light of the Magnuson-Stevens provisions and the National Standard Guidelines. In 2000, HMS plans to continue implementing and evaluating the FMP measures in an attempt to remedy the overcapitalization and overfishing problems that affect many highly migratory species. The February 2000 AP meeting provides an excellent opportunity to identify and discuss those issues raised in the SAFE report which require further management. Through continuous public and constituent interaction, increased monitoring, ongoing life history work, and additional socio-economic assessment, HMS strives to continue building sustainable fisheries for all Atlantic highly migratory species.