

Science, Service, Stewardship



Species Working Group
Recommendations
ICCAT Advisory Committee

Research

IAC, October 2012

**NOAA
FISHERIES
SERVICE**

NOAA



Bluefin Tuna Working Group





Bluefin Tuna Working Group

- **Ask SCRS to reevaluate the degree of eastern stock underreporting based on analysis of the trade data, and consider making a sensitivity run with these data.**

During the 2012 stock assessment , the SCRS reevaluated the degree of eastern stock catch underreporting based on analyses of trade data. A number of concerns were raised about errors and uncertainties in the data and conversion factors used; therefore the SCRS decided not to make a sensitivity run with these data. However, it was noted that these problems might be solved through the use of Bluefin Catch Documents.



Bluefin Tuna Working Group

- **The United States should encourage its ICCAT partners to honor their funding commitments to the Atlantic Wide Bluefin Year Program. In addition, NMFS should establish a process for consistent funding and integration of existing HMS research.**

An HMS research plan was developed, providing guidance on priorities and funding needs.



Bluefin Tuna Working Group

- **In advance of each stock assessment, NMFS should host a BFT workshop for the sharing of best available science and for prioritizing future research.**
- *The SCRS Bluefin Tuna WG will hold an inter-sessional meeting in early 2013 to evaluate the new biological information (growth, ageing, maturity, reproduction) coming from GBYP and other ongoing research projects and review basic biological assumptions and relationships.*



Bluefin Tuna Working Group

- **The United States should continue scientific research to obtain a greater understanding of the following:**
 - **a. Changes in coastal fisheries (e.g., examine hypotheses regarding shifts in bluefin distribution, abundance, and other factors such as prey availability and environment**
 - **b. stock structure and mixing**
 - **c. early life history, reproductive and maturity schedules, and recruitment processes**
 - **d. further investigation of spawning grounds**
 - **e. post-release mortality in recreational and commercial fisheries**
- *(a-d) Results from a number of studies were presented during the bluefin stock assessment meeting, including studies involving otoliths, electronic tagging, maturity/reproductive evaluation, size structure, habitat data, etc.*
- *(e) studies ongoing or completed*



Bluefin Tuna Working Group

- **Explore the development of fishery independent estimates of abundance such as aerial and sonar surveys, tagging, and experimental long lining.**
- *Eastern GBYP conventional tagging in Phase 3, tagging of 1-3 year-old bluefin in the West has been contracted*

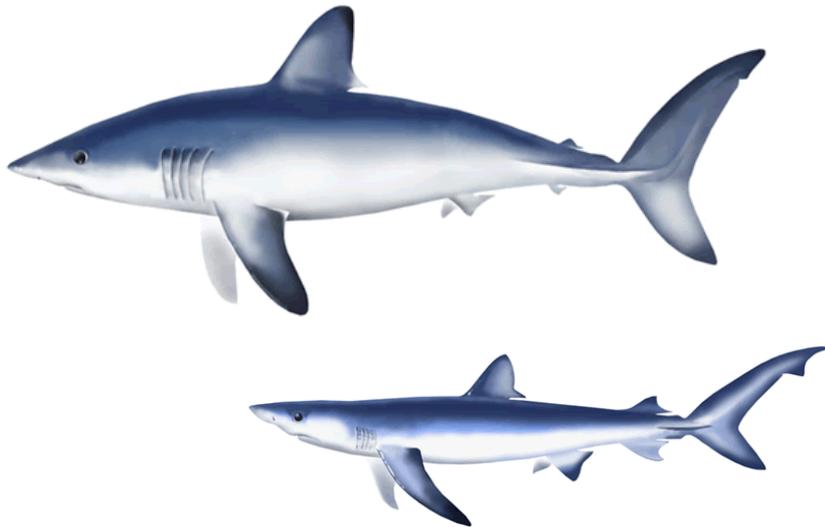


Bluefin Tuna Working Group

- **In light of the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, the Bluefin Working group recommends that NOAA pursue NRDA funding for long term monitoring of the impacts on bluefin tuna, as well as funds for habitat restoration. NOAA should conduct a hazard assessment for bluefin tuna in relation to oil and gas activities (e.g., spills, exploration) based on habitat modeling in the Gulf of Mexico.**
- *Spawning habitat models were used to define the degree of overlap of spawning habitat and oil-contaminated waters.*
- *Additional plans are being developed for monitoring and mitigation measures, but these have not been made public due to pending litigation. NOAA scientists are involved in the development of these plans (recommendations by outside experts are welcome)*



Shark Working Group





Shark Working Group

- **The SCRS should update the population assessment for blue sharks in 2013. . . identify high seas areas critical to the health of ICCAT species for potential time/area closures.. . conduct a data review for common thresher sharks with the goal of a future assessment...**
- *The SCRS Sharks WG has identified two priorities for 2013:*
 - *Elaborating a “Special Research Program on Sharks” focused on the reduction of the main sources of uncertainty in the formulation of scientific advice including the improvement of data collection and reporting procedures. (which will help lay the groundwork for the IAC recommendations)*
 - *The completion of the Ecological Risk Assessment of 16 pelagic shark species, updating part of the productivity and susceptibility data, and enhancing the fishing effort data.*



Shark Working Group

- **The SCRS should encourage and review research regarding shark bycatch and release mortality associated with various pelagic fishing methods and gears.**
- *This has been done to some extent as part of the 2012 ERA with respect to pelagic longlines, but much work remains to be done. It is, in part, one of the research recommendations from the SCRS Shark WG but relies on the provision of data by the CPCs.*



Bigeye, Albacore, Yellowfin and Skipjack (BAYS) Tunas Working Group





BAYS Tunas Working Group

Tagging programs.

- **The Working Group continues to recommend that the United States support an enhanced, Atlantic-wide tagging program for tropical tuna species, using both conventional and electronic tags, as proposed in the 2010 SCRS report.**
- *The U.S. provided \$62,500 toward this program in 2012. The SCRS Tropical Tunas WG will consider the best use of these funds during its 2012 inter-sessional meeting, which will likely be to fund a Call for Tenders for the development of a detailed scientific design of the tagging program.*
- *The SCRS scientist coordinating efforts to achieve program funding met with EU officials, who expressed interest in supporting the program. The next steps involve official statements from CPCs of interest and/or offers of support.*



BAYS Tunas Working Group

- **Fishery independent research in U.S. waters :**

The Working Group recommended that the United States implement fishery independent research on bigeye and yellowfin, particularly electronic and conventional tagging studies, to gain better understanding of migratory patterns and address other data gaps. The Working Group noted the potential to optimize utilization of research funds by using bluefin tagging platforms for enhanced yellowfin and bigeye research.

- *Following on a study with Rooker et al (32 PSAT tagged YFT in the GOM), SEFSC scientists have so far implanted 54 pop-up satellite archival tags on YFT in the GOM to obtain information on distribution, movement patterns, and habitat. The majority of these were deployed from platforms used to study gear modifications to reduce BFT bycatch (and to tag BFT).*
- *A collaborative agreement was reached through MexUS to deploy at least 12 tags on YFT in Mexican waters of the GOM (funded by NOAA)*



BAYS Tunas Working Group

- **Data Reporting Recommendations:**
 - **VMS:** Recommended that the U.S. and ICCAT explore the feasibility of more frequent VMS polling and ensure the data is provided to SCRS for stock assessments
 - *The SCRS considered results that confirm that more frequent polling provides improved scientific value, and recommended that options such as making these data available under confidentiality rules be considered*
 - **Ghana Fisheries:** Recommended that the U.S. fully support the Ghana data improvement program and consider additional port sampling efforts to improve catch statistics.
 - *U.S. scientists participated in the Ghana data improvement working group, and the development of a port sampling plan*



BAYS Tunas Working Group

- **Data Reporting Recommendations:**
 - **Cannery Data:** Recommended that the SCRS fully utilize data provided by ISSF-affiliated canning companies.
 - *The Tropical Tunas WG will consider, during its 2013 inter-sessional meeting, how to best utilize the data provided through ISSF*
 - **Historic Landings Data:** Emphasized concerns regarding U.S. historical yellowfin tuna landings data (in particular recreational landings).
 - *Ensuring the accuracy of recreational yellowfin landings estimates moving forward is a priority. Current data on the fishery may shed light on historical estimates.*



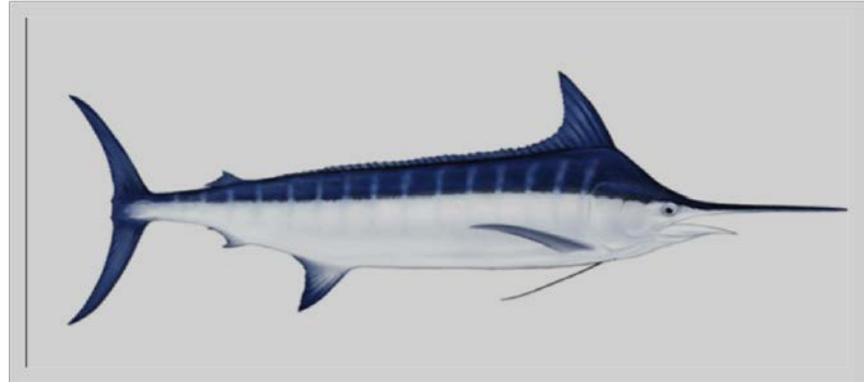
BAYS Tunas Working Group

- **Southern Albacore Stock Assessment:** The Working Group expressed concern over the accuracy of conclusions of the South Atlantic albacore assessment. . .and was concerned by the lack participation by scientists from key CPCs. . . the WG strongly supported U.S. and ICCAT efforts to train scientists in stock assessment methods and stressed the need to take steps to ensure scientists from countries with important fisheries attend relevant stock assessment meetings.
- *U.S. scientists are scheduled to participate in the 2013 assessments of Northern and Southern Albacore.*
- *Training in the use of Stock Synthesis software is scheduled for ICCAT cooperating parties in January 2013*



BAYS Tunas Working Group

- **Yellowfin Assessment:** Recommended that the next yellowfin assessment be delayed until 2014 so that data for first full year of implementation of Recommendation 11-01, including the expanded time/area closure, are available.
- *The SCRS has not recommended an assessment of YFT in 2013 (meaning that it will not be assessed until at least 2014, unless the Commission requests an assessment in 2013).*



Billfish Working Group





Billfish Working Group

Increase the emphasis on collection and analysis of life-history data for billfish. Noting that many of the basic life-history parameters of billfish are still poorly understood for all life stages, the BSWG encourages continuing basic billfish research in age, growth, natural mortality, spawning areas, and population structure. The BSWG agreed that in an effort to differentiate between Gulf and Atlantic stocks, more research should be directed toward determining whether otolith chemistry is stage specific, if more markers can be considered in the analysis, and if regional differences can be detected.

- *NOAA scientists processed hardpart samples from many larger BUM specimens, and plan to work collaboratively with Brazilian scientists to develop a growth curve using these important specimens (the current data base is lacking in samples from larger fish).*
- *U.S. scientists have deployed electronic tags on billfish to track movements, including to/from spawning areas*



Billfish Working Group

- **Continue to conduct research regarding the control of the depth distribution of hooks deployed by pelagic longline vessels, emphasizing a greater diversity of gear hooks are located in the water column, and the duration for which the fish are on the hook. The BSWG agreed that by continuing to enhance the understanding of where longline hooks are located in the water column under varying hydrological conditions and how best to control their depth, research in this area could improve the accuracy of CPUE data, strengthen future assessments, and help resolve current discrepancies in ICCAT billfish data.**
- *Bycatch mitigation study may provide some insight. . .*

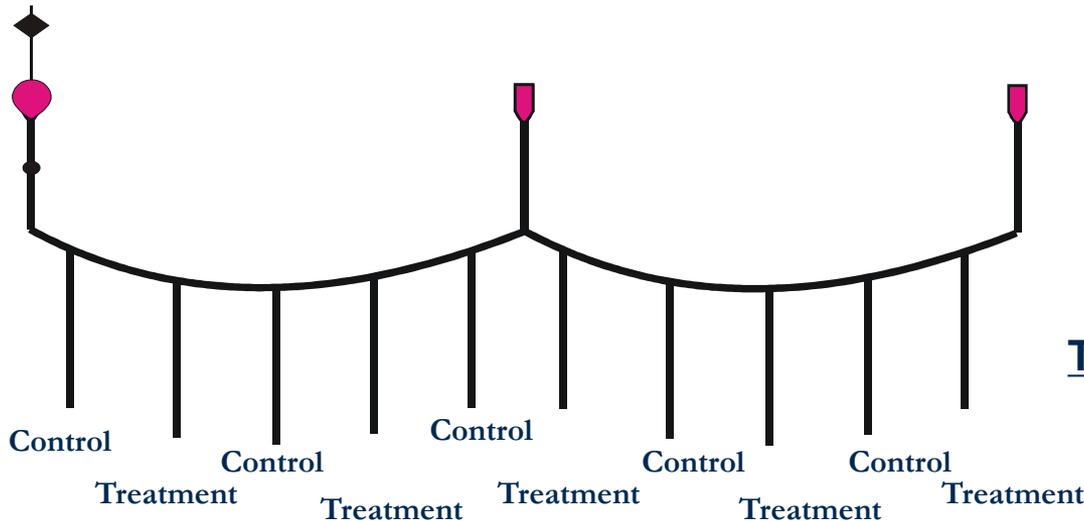


2012 Weak Hook Research Objectives

- Improve the precision of the point estimate and confidence interval of the reduction of bluefin tuna achieved with 16/0 weak hooks
- Use Hook Timers and Temperature Depth Recorders to better understand the process of fish escapement from weak hooks
- Deploy PSAT tags on yellowfin and bluefin tuna



2008-12 Experimental Design Gear Configuration



Control: Standard 16/0
Mustad 39960

Treatment : 16/0 Weak hook
Mustad 39988

2012

Hook timers (HTRs) 300 hooks
150 on each hook type

Temperature Depth Recorders (TDRs)
150 weak hooks, 9 m above hooks



Billfish Working Group

- **Encourage NMFS to continue cooperative research programs with CPCs and enhance current information regarding potential differences in the catchability of non-target finfish species on pelagic longline gear when deploying circle hooks versus J-hooks.**
- *Discussions have taken place with scientists from CPCs (plans to collaborate on a study in the Mexican PLL fishery comparing J-hook and circle hook catch rates have not progressed, but Mexican scientists were encouraged to explore this during their own scheduled study).*



Billfish Working Group

- **Investigate techniques and approaches for the long-term management of the artisanal, small-scale commercial, and recreational fisheries. The BSWG would like to note that the ability to monitor and manage artisanal fisheries will increasingly become a challenge for ICCAT, but it is imperative that these data are collected.**
- *The SCRS highlighted this concern and recommended that these data be collected.*



Swordfish Working Group





Swordfish Working Group

- **Undertake research on the characterization of the swordfish “deep-drop” fishery, including catch and fishery parameters.**
- *Work is planned (pending funding)*
- **Undertake collection of swordfish biological samples in expectation of future retrospective analyses.**
- *Potential sampling opportunities through the pelagic longline observer program.*



Swordfish Working Group

- **The Agency should work with Canada to encourage the development of explicit swordfish Limit Reference Points (LRPs), as planned by the SCRS.**
- *Methods working group work plan to evaluate LRPs*
- *ISSF working group meeting on Limit/Target reference points planned for 2013.*
- *NOTE: Planned research collaboration with Canadian scientists to develop joint US-Canadian longline index for the 2013 swordfish assessment*



Swordfish Working Group

Gear Modification/Bycatch Mortality

- Continue the development of additional gear technology and modifications to reduce bycatch and bycatch mortality (e.g., weak hook and circle hook studies).
- Assessment of a relatively “clean” fishery technology (e.g., swordfish buoy gear) in areas other than Florida straits.
- Continue cooperative fisheries research programs with CPCs.
- *Continuation of the weak hook study was conducted in 2012 in the Gulf of Mexico.*
- *Evaluation of buoy gear in the GOM was conducted.*
- *Existing cooperative fisheries research programs with CPCs were continued , new collaborations were planned or initiated.*