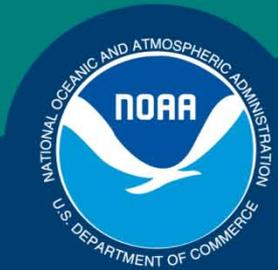


Science, Service, Stewardship



2012 SCRS Research Activities and U.S. Participation

**2012 Spring Species Working Groups Meeting
of the Advisory Committee to the U.S. Section to ICCAT
May 1 - 2, 2012, Silver Spring, MD**

**NOAA
FISHERIES
SERVICE**





SCRS Officers

Chairman, SCRS

J. Santiago (EU)

Convener, Sub-Committee on Ecosystems

S. Calay (USA)

Convener, Sub-Committee on Statistics

G. Scott (USA) acting

Convener, Methods Working Group

P. de Bruyn (EU)

Ad hoc Tagging Working Group East Coordinator: E. Rodriguez-Marin (EU)

West Coordinator: E. Prince (USA)

Tropical Tunas Coordinator

J. Pereira (EU)

Bigeye tuna Rapporteur :

D. Die (USA)

Yellowfin tuna Rapporteur :

C. Brown (USA)

Skipjack Rapporteur:

D. Gaertner (EU)

Atlantic Albacore Rapporteur :

H. Arrizabalaga (EU)

Mediterranean Albacore Rapporteur :

J. Ortiz de Urbina (EU)

Bluefin tuna Coordinator:

J. Powers (USA)

East Atlantic Rapporteur:

J.M. Fromentin (EU)

West Atlantic Rapporteur:

C. Porch (USA)

Billfishes Rapporteur :

F. Arocha (Venezuela)

Swordfish Coordinator:

J. Neilson (Canada)

North Atl Swordfish Rapporteur :

J. Neilson (Canada)

South Atl Swordfish Rapporteur :

Thierry Frédou (Brazil)

Mediterranean Swordfish Rapporteur :

G. Tserpes (EU)

Sharks Rapporteur :

A. Domingo (Uruguay)

Small tunas Rapporteur :

Nouredine Abid (Morocco)



SPECIES

Last/Next assessment

YFT, Yellowfin Tuna, *Thunnus albacares*

2011 / 2014?

BET, Bigeye Tuna, *Thunnus obesus*

2010 / 2013?

SKJ, Skipjack Tuna, *Katsuwonus pelamis*

2008 / 2013?

ALB, Albacore, *Thunnus alalunga*

2009/ **2013** (N. Atl)

2011/ 2014? (S. Atl & Med.)

BFT, Atl. Bluefin Tuna, *Thunnus thynnus t.*

2010/ **2012**

SWO, Swordfish Atl. , *Xiphias gladius*

2009/ **2013**

SWO-Med., *Xiphias gladius*

2010/ 2013?

SAI, Sailfish, *Istiophorus albicans*

2009/ ?

BUM, Blue Marlin, *Makaira nigricans*

2011 / 2016?

WHM, White Marlin, *Tetrapturus albidus*

2006 / **2012**

Small Tunas (various)

N/A

Pelagic sharks, *Prionace glauca*, *Isurus oxyrinchus*

2008 / **2012**

WG-Stock Assessment Methods

- ***Madrid, Spain: April 16-20, 2012***
 - Examined methods for combining multiple CPUE series
 - GLM Based Approaches
 - Hierarchical Methods (Conn 2010, CJFAS)
 - Developed protocols for development and use of CPUE series
 - Defined minimum required elements
 - Developed tools to guide the selection of CPUE series and evaluate their utility for stock assessment
 - Computed “Biological Plausibility Bounds” for interannual variations in CPUE (SCRS/2012/039 Walter and Cass-Calay)
 - ***The group recommended that these tools be used by future Species Groups.***

- Discussed methods for monitoring and evaluating recreational fisheries
 - *The group recommended that the Secretariat develop a form to distribute among the CPCs to obtain information on the nature of their recreational/sport fisheries and details of the data being collected.*

- Testing generic assessment techniques and methods through simulations
 - Simulation of stock assessment parameters from Life History Theory (SCRS/2012/034, Kell et al.)
 - Evaluation of the uncertainty in the Kobe 2 Strategy Matrix due to biological processes (SCRS/2012/036, Kell et al.)

- Discussed the implications of Recommendation 11-13 and Resolutions 11-14 and 11-17
 - Developed standardized Detailed Report and Executive Summary formats
 - Incorporation of uncertainty around the stock status determination in the Kobe Plot
 - Stock Assessment Validation and Quality Control
 - Recommended cooperation with other entities to develop common practices: NOAA Fisheries Toolbox, Strategic Initiative on Stock Assessment Methods (SISAM).
 - Improving scientific training and methodological skills
 - Stock Synthesis workshops
 - Joint ICCAT/ICES MSE training group

ICCAT GBYP Meeting

Madrid, Spain: April 17-18, 2012

● **Review of 2011 activities**

- GBYP tagging activities (Dr. Jose Cort)
- the electronic tagging carried out by WWF-MedPO in Morocco
- electronic tagging carried out by IEO-Malaga
- biological/genetic sampling and analyses

● ***Biological Sampling***

- Biological sampling conducted in 2011 has been successful. Yet samples from a number of important areas are lacking, including the Azores, Canary Islands, North Africa (Libya, Tunisia) as well as parts of the Central Mediterranean (Croatia) and the eastern Mediterranean (off Lebanon). These are needed to evaluate stock structure.
- The group recommended sampling in these areas in 2012 and repeated sampling in the areas sampled in 2011 in order to be able to characterize interannual variability.
- It was also noted that adequately sampling for an age length key for stock assessment purposes entails regular (i.e. annual) and wide spread geographic sampling and requires long term commitment, extending well beyond the current time frame of the GBYP

● *Tagging*

- The group discussed ways to achieve acceptable tag recovery rates, including:
 - Tagging Awareness Campaign
 - Cooperative agreements with regional observer programs

- The group agreed that the 2012 tagging program should attempt to release a minimum of 10,000 conventional tags among the key areas known to support substantial concentrations of age 1 bluefin tuna.

- The GBYP has purchased a number of mini-PATS and recommends that these now be deployed on juveniles to provide additional information on mixing and movement rates.

● ***Call for Tender***

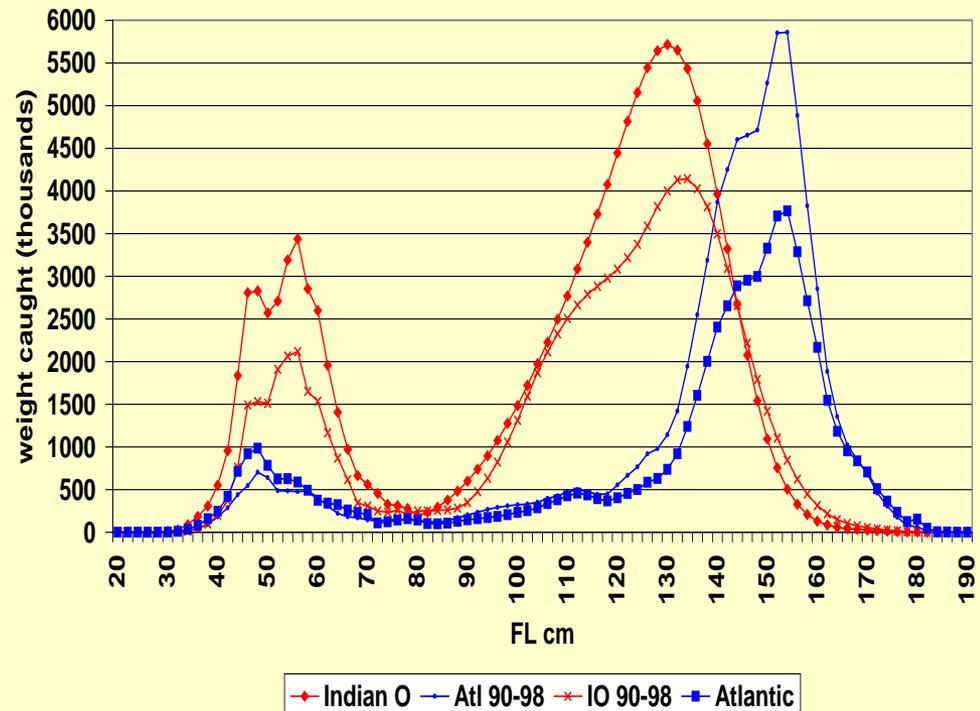
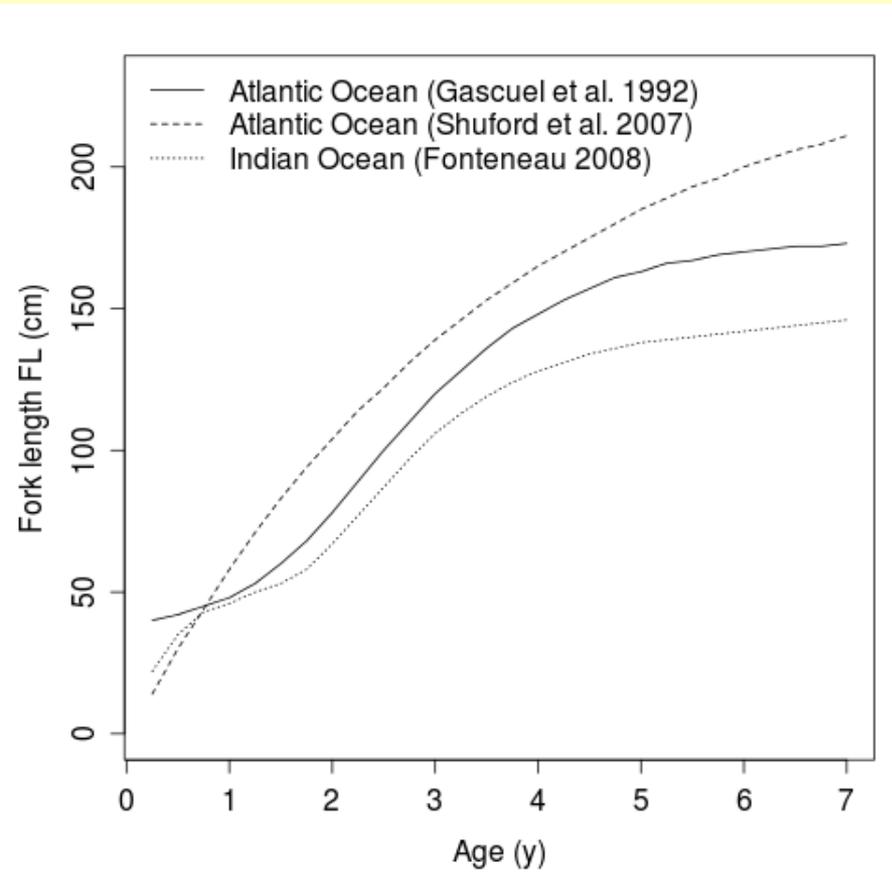
- It was agreed that a tender be circulated to contract baitboats and develop a flexible sampling strategy to effectively balance three major considerations:
 - Tag at least 10,000 juveniles
 - Tag over a broad geographic range, including as many areas as possible with high concentrations of one year old fish
 - Accommodate logistical/budget constraints including the availability of vessels, tagging crews and associated expenses.
- The group also discussed operational aspects of the tagging program
 - Dual tagging cradles and voice recorders, collection of fish for biological sampling from each tagging area, overlapping deployment of electronic and conventional tags, training of taggers.

WG-Tropical Tunas

Madrid, Spain: April 23-27, 2012

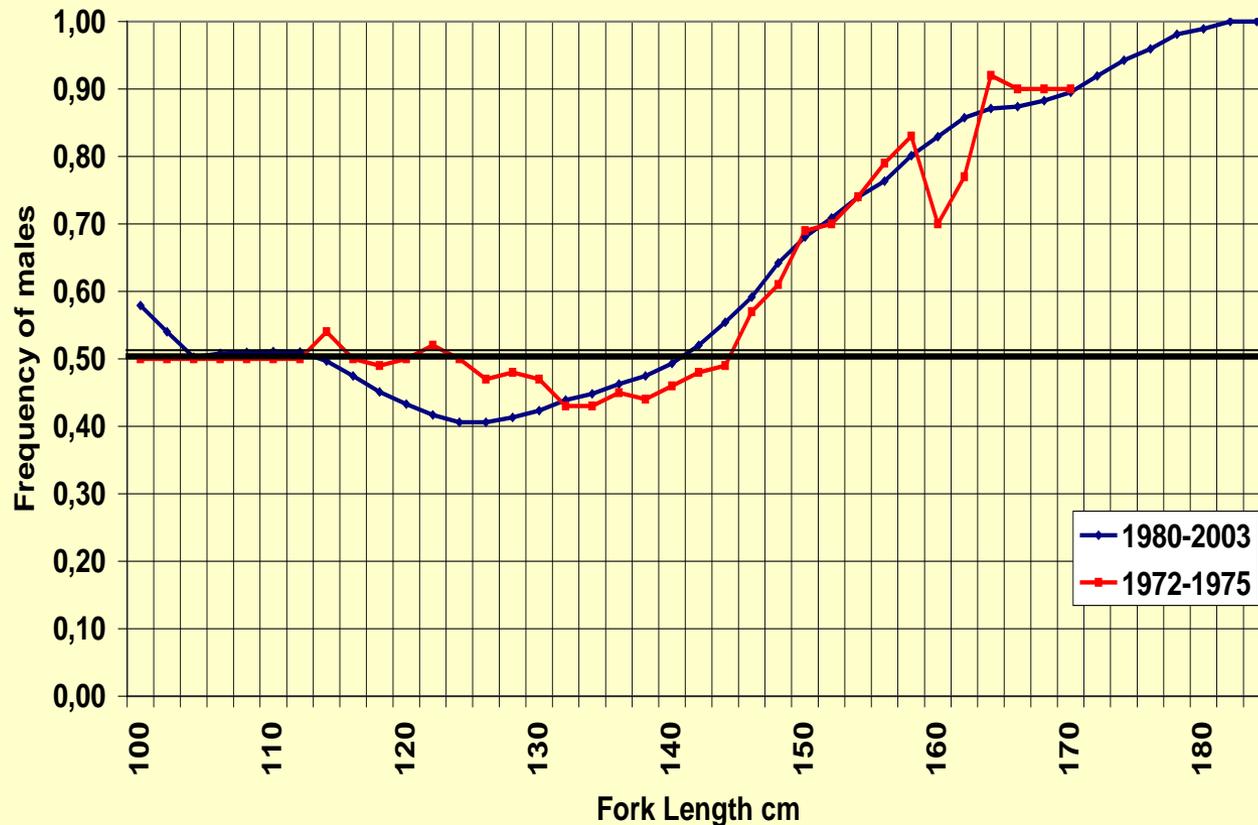
- ***Biological parameters for tropical tunas in T-RFMOs***
 - The group compared the biological parameters assumed or calculated by the different tuna RFMOs during stock assessments of tropical tunas. The differences found highlight the need for basic biological research on these parameters that can have major influence on the perception of stock status and the development of management plans.

- **Growth Functions:** The group recommended further exploration of possible historic changes, effects of fishing selectivity, and estimation using multiple data sources and integrated stock assessment models



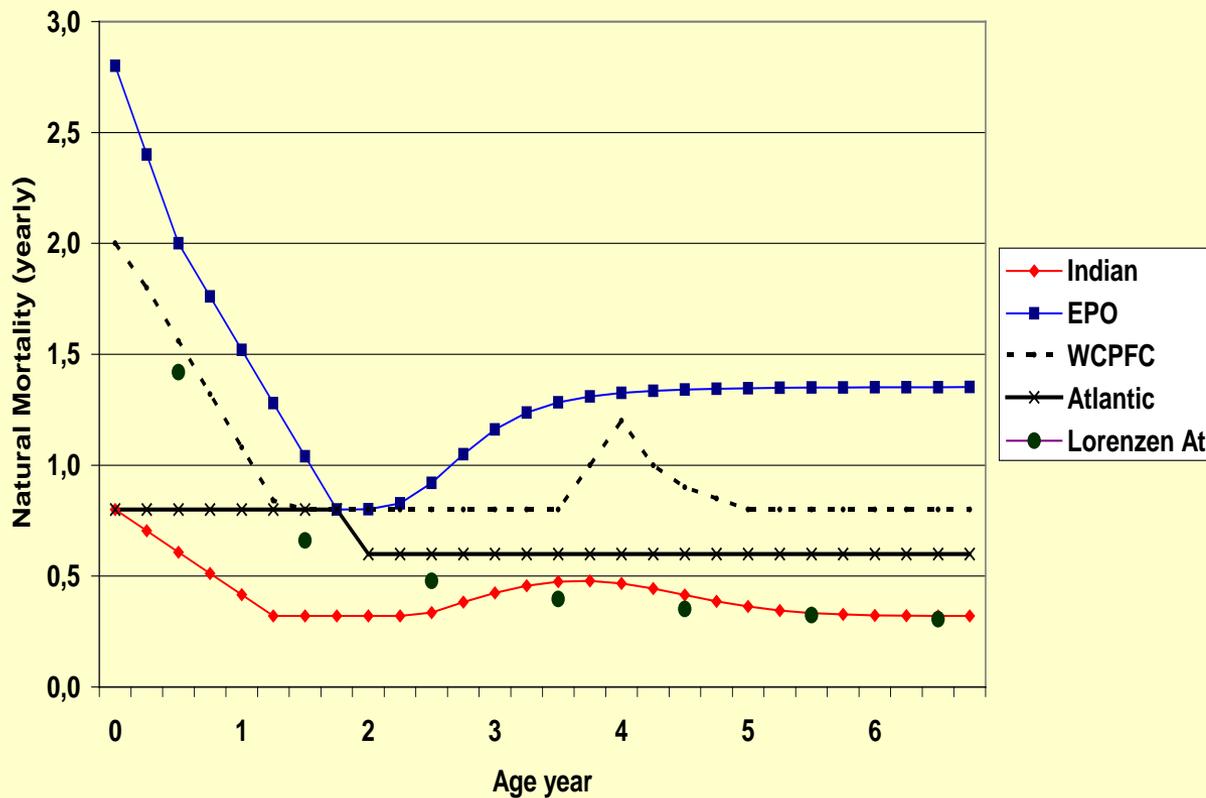
Average catch at size of YFT (in weight) taken by EU purse seiners in the Indian and Atlantic oceans during 2 recent periods.

- **Sex Ratios:** The group recommended exploration of sex-specific growth/mortality and accommodation of these functions within future assessment models.



Sex ratio at size of yellowfin:
Proportion of males in the Eastern Atlantic during two time periods

- **Natural Mortality:** The group recommended exploration of alternative natural mortality functions (e.g. “Lorenzen”).



Natural mortality at age used for YFT by the various tuna RFMOs in their stock assessments

- The group evaluated WG-SAM CPUE protocols, including:
 - Application of protocols for index inclusion using an example, YFT.
 - Comparison of methods used to combine indices (GLM vs. Conn 2010).

- The group discussed improvements to the standardization of purse seine and baitboat CPUE series.
 - *The group reviewed newly available information and noted that some analyses were ongoing on the data and that results would be presented at the ISSF workshop on purse seine CPUE planned in July 2012.*

- The group developed a Port Sampling Plan and an associated ICCAT Observer On-board Sampling Plan aimed at collecting fishery data for BET, YFT and SKJ that are caught in the geographical area of the area/time closure.

- The group discussed the implementation of a large-scale tagging program.
 - *The group recommended that a scientist be identified to promote the launching of this tagging program. The group also recommended that the corresponding costs of this promotion be funded by ICCAT pending evaluation and approval of the budget by the SCRS.*
- The group also reviewed the progress of a joint tuna-RFMOs meeting on the harmonization of the purse seine observer programs for tropical tunas. The group intends to identify minimum data standards and data fields that should be collected across all RFMOs to allow interoperability.
 - *A meeting of technical experts from tuna purse-seine fisheries observer programs was convened from 5 - 9 March 2012, in Sukarietta, Spain, and provided the first opportunity for progress towards completion of this task for purse-seine fisheries.*
 - *Further meetings will explore the “harmonization” of longline observer programs. The Group fully supported these efforts.*

White marlin stock assessment session

May 21st to 25th, 2012 (*Madrid, Spain*)

In addition to typical stock assessment activities/responsibilities, SEFSC personnel have been conducting the following research:

- Ongoing retrospective analyses of existing samples to identify roundscale spearfish vs. white marlin
- Exploration of ***potential*** advantages of advanced stock assessment techniques (e.g. integrated statistical models).
- Examination and validation of conventional tagging database.
- Exploring CPUE standardization that takes into account the different catchability inside/outside the OMZ.
- Developing models that utilize tagging and environmental data to identify/account for preferred habitat.

Shark Ecological Risk Analysis and Shortfin Mako Assessment

June 11th to June 18th, 2012 (Algarve, Portugal)

- Conduct a shortfin mako (*Isurus oxyrinchus*) stock assessment and an Ecological Risk Assessment for 18 species (*Prionace glauca*, *Isurus oxyrinchus*, *Isurus paucus*, *Lamna nasus*, *Carcharodon carcharias*, *Sphyrna zygaena*, *Sphyrna lewini*, *Alopias vulpinus*, *Alopias superciliosus*, *Carcharhinus longimanus*, *Carcharhinus falciformis*, *Carcharhinus signatus*, *Carcharhinus obscurus*, *Carcharhinus plumbeus*, *Galeocerdo cuvier*, *Pseudocarcharias kamoharai*, *Pteroplatytrygon violacea*, *Manta birostris*).
- Information on life history, fishing operations, and on the status, availability and size of the individuals caught (collected from observer programs) is used to estimate vulnerability and to thus generate a specific ERA for each fleet.



ICCAT Subcommittee on Ecosystems

July 2nd to 6th 2012 (Sete, France)

- Response to Rec 10-09, Impact of ICCAT Fisheries on Sea Turtles. Requires “impact assessment” by 2013.
 - Review available data
 - Identify data gaps
 - Review and recommend impact assessment methodologies

- The group will also consider ecosystem based methods relevant to the SCRS, including:
 - Ecosystem indicators
 - Ecosystem models
 - Ecosystem based fisheries management

- With support from the U.S., ICCAT hired a Sea Turtle Expert (Dr. Rui Coelho) to assist in the SC-ECO efforts. This is a 6-month contract which began early 2012. Dr. Coelho has already made excellent progress assembling data, methodologies and literature to assist the assessment of the impact of ICCAT fisheries on Sea Turtles.
- As recommended by the SCRS, ICCAT recently hired a full-time bycatch coordinator (Dr. Paul DeBruyn). He reported to ICCAT on April 30, 2012.



Bluefin Tuna stock assessment session

September 4th to 11th, 2012 (*Madrid, Spain*)

- As research projects remain incomplete (e.g. GBYP), and assessment models must be developed/set up to incorporate these results. . .

The stock assessments will be conducted using methodologies applied in recent assessments.

2012 SPECIES GROUPS and SCRS PLENARY SESSIONS

September 24th to October 5th, 2012 (*Madrid, Spain*)

- **All species groups/ other working groups**
- **Sub-Committee on Statistics**
- **Draft and Adopt Executive Summaries**

