



# **The 16<sup>th</sup> Meeting of the ISC: Activity Report**

**Gerard DiNardo**

**ISC Chairman**

**<http://isc.ac.affrc.go.jp>**

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# Presentation Topics

- **Participants**
- **Working Group Workshops & Activities**
- **Stock Status & Conservation Advice**
- **Interactions with Regional Organizations**
- **Administrative matters**
- **Future Activities**

# ISC16 Participants

## July 2016 Sapporo, Japan

### ISC Members

- Canada
- Chinese Taipei
- Japan
- Republic of Korea
- United States of America

### Non-Voting Members

- WCPFC
- PICES

### Observers

- Pew Charitable Trust
- World Wildlife Fund for Nature – Japan
- Duke University
- Monterey Bay Aquarium
- Wild Oceans

# Working Group Workshops & Activities

- **Pacific Bluefin Tuna WG Workshop**
  - November 2015 (Kaohsiung, Taiwan) – Data preparation
  - March 2016 (La Jolla, CA USA) – Benchmark assessment
  - July 2016 (Sapporo, Japan) - Finalize presentation & work plan
- **Albacore WG Workshop**
  - March 2016 (Shimizu, Japan) – Assessment and MSE planning
- **Billfish WG Workshops**
  - January 2016 (Honolulu, HI USA) – Pacific blue marlin Data preparation
  - March 2016 (Busan, Korea) – Pacific blue marlin update stock assessment
  - July 2016 (Sapporo, Japan) – Finalize presentation & work plan

# Working Group Workshops & Activities

- **Shark WG Workshops**
  - April 2016 (Webinar) – North Pacific blue shark data preparation
- **Statistics**
  - July 2016 (Sapporo, Japan) – Status of assignments; update work plan

# ISC Stock Assessments

- **Pacific Bluefin Tuna**
  - Benchmark assessment
- **Pacific Blue Marlin**
  - Update assessment
  
- **NP Swordfish, NP Blue Shark, NP Albacore, NP Striped Marlin and Shortfin Mako Shark – No assessments**

# Stock Status and Conservation Advice

## Pacific Blue Marlin – Stock Status

- Compared to MSY- based reference points, the current spawning biomass was 23% above  $SSB_{MSY}$  and the current fishing mortality was 14% below  $F_{MSY}$ .
- The base case assessment model indicates that the Pacific blue marlin stock is currently not overfished and is not subject to overfishing relative to MSY-based reference points.

# Stock Status and Conservation Advice

## Pacific Blue Marlin – Conservation Advice

- To avoid overfishing of this nearly fully exploited stock ( $F/F_{MSY} = 0.88$ ) fishing mortality should not be increased from the current (2012-2014) level (0.28).

# Stock Status and Conservation Advice

## Pacific Bluefin Tuna - Stock Status

- Although no limit reference points have been established for the PBF stock under the auspices of the WCPFC and IATTC, the  $F_{2011-2013}$  exceeds all calculated biological reference points except for  $F_{MED}$  and  $F_{LOSS}$  despite slight reductions to  $F$  in recent years
- The ratio of SSB in 2014 relative to the theoretical unfished SSB ( $SSB^{2014}/SSB_{F=0}$ , the depletion ratio) is 2.6% and  $SSB_{2012}/SSB_{F=0}$  is 2.1% indicating a slight increase from 2012 to 2014

# Stock Status and Conservation Advice

## Pacific Bluefin Tuna - Conservation Advice

- Projection using the base-case model under several harvest, recruitment and time schedules were conducted. Under all examined scenarios the initial goal of WCPFC, rebuilding to  $SSB_{MED}$  by 2024 with at least 60% probability, is reached.
- Given the low SSB, the uncertainty in future recruitment, and the influence of recruitment has on stock biomass, monitoring recruitment and SSB should be strengthened so that the recruitment trends can be understood in a timely manner.

# Stock Status and Conservation Advice

## Pacific Bluefin Tuna - Conservation Advice

- The ISC notes that there are technical inconsistencies in the calculation of  $SSB_{MED}$  in the assessment and projection.
- The current calculation of  $SSB_{MED}$  in the projection incorporates the most recent estimates of SSB and unless a fixed period of years is specified to calculate  $SSB_{MED}$ , its calculation could be influenced by future trends in spawning biomass. The ISC recommends defining  $SSB_{MED}$  as the median point estimate for a fixed period of time, either, 1952-2012 or 1952-2014.

# Stock Status and Conservation Advice

## Pacific Bluefin Tuna - Conservation Advice

- Absolute values should not be used for the initial rebuilding target, as the calculated values of reference points would change from assessment to assessment.
- The probability of achieving the WCPFC's initial target ( $SSB_{MED}$  by 2024) would increase if more conservative management measures were implemented.
- WCPFC CMM 2015-04 specifies that catches of fish smaller than 30kg should be reduced. The weight threshold needs to be increased to 85kg (weight of age 5) if the intent is to reduce catches on all juveniles according to the maturity ogive in the assessment.

# Interactions with Regional Organizations

## IATTC

- Cooperate in research & assessments (species WG)
- Exchange of data at WG and data inventory (Category I, II, and III)
- IATTC attended and participated in the May 2016 ISC MSE Workshop in Yokohama, Japan
- Updated ISC-IATTC Memorandum of Cooperation in 2016

# Interactions with Regional Organizations

## WCPFC

- Overview of Western and Central Pacific Ocean fisheries and stock status presented at ISC16
- Routinely exchange data inventories (Category I, II, and III)
- Presentation of Pacific bluefin tuna and Pacific blue marlin stock assessments at WCPFC-SC12 and WCPFC-NC12

# Interactions with Regional Organizations

## PICES

- **2015 Annual Meeting (Oct. 2015)**
  - Presented ISC structure and recent activities (poster)
  - Presented proposal for establishing a joint working group (WG) within PICES to assess impacts of climate change on highly migratory species.
- **January 2016**
  - WG 34 established – Ocean Conditions and the Distribution and Productivity of Highly Migratory Species (Oct. 2015-2018)

# Administrative matters

## ISC Leadership Changes

- John Holmes reelected as ALBWG Chair for 1 year
- Gerard DiNardo reelected as ISC Chair for 1 Year-  
**POSITIVELY LAST YEAR!**

## ISC17

- Canada, July 2017

# Future Activities (2016-2017)

- **Pacific Bluefin Tuna WG**
  - Feb./March 2017 – Research planning
- **Billfish WG**
  - Dec. 2016 – Research webinar
  - March 2017 – Research planning

# Future Activities (2016-2018)

## ● Shark WG

- Sept. 2016 – Blue shark data preparation webinar
- Nov. 2016 – Blue shark data prep
- March 2017 – Blue shark stock assessment

## ● Albacore WG

- Nov. 2016 – Data prep
- April 2017 – Stock assessment

## ● International Workshop on Indicators (2017-2018)

- Work with RFMOs and other scientific organizations to co-convene this workshop

# SC-12 Presentations

- **Pacific Bluefin Tuna – S. Kakatsuka**
- **Pacific Blue Marlin – J. Brodziak**



**THANKS!**