

Management strategies evaluation (MSE) activities performed by the staff

Inter-American Tropical Tuna Commission

May 2014 – May 2015



6th Meeting of the Scientific Advisory Committee
La Jolla, 11-15 May 2015

www.iattc.org

Activities

- Capacity building
- Scientific meetings
- Research
- Working groups
- Research proposals

Capacity building

Areas Beyond National Jurisdiction (ABNJ, FAO, World Wildlife Fund-WWF):

Eastern Pacific Ocean Coastal States Tuna Management Workshop

Gamboia Rainforest Resort,
Panama, 24-25 February 2015

The goal of this workshop was to create a better understanding among Eastern Pacific Ocean Coastal States of the precautionary approach, Harvest Strategies (HSs) and management strategy evaluation (MSE) for sustainable tuna fisheries in the context of tuna fisheries



Photo : Ana Espinoza, WWF

Capacity building

Eastern Pacific Ocean Coastal States Tuna Management Workshop

IATTC staff participation

Alex Aires-da-Silva gave the presentation *“An overview of the harvest strategy and management strategy evaluation process (MSE) at the Inter-American Tropical Tuna Commission (IATTC)”*

Carolina Minte-Vera gave the presentation *“Ejercicio: Evaluación de la estrategia manejo de los atunes tropicales en el Océano Pacífico oriental”*

Dr. Guillermo Compean participated in the discussions

Scientific Meetings

International Seafood Sustainability Foundation (ISSF)

2015 Stock Assessment Workshop "Characterizing uncertainty in stock assessment and management advice"

16-18 March at the Monterey Bay Aquarium

The purpose of the 2015 ISSF Stock Assessment Workshop was to review recent progress made by the tuna RFMOs towards adopting harvest strategies, with particular emphasis on the methodologies used to quantify and express uncertainty in stock status results. Discussions will aim to highlight the pros and cons of different approaches, and recommendations for harmonization will be made where appropriate. Topics: 1) Harvest strategies (Reference Points, Harvest control rules), 2) Quantification of risk (Main assessment models used, How uncertainty is estimated, How structural uncertainty is treated, How risk of exceeding Limits or probability of achieving Targets is calculated, Uncertainty in projections), 3) MSE

Carolina Minte-Vera gave the presentation "*Progress towards implementing harvest strategies and addressing uncertainty in the management of EPO tuna fisheries*"

Scientific Meetings

International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) Management Strategy Evaluation Workshop

April 16-17, 2015, Yokohama, Japan

The purpose of the ISC Management Strategy Evaluation Workshop was to review the objective, benefits, and requirements to implement an MSE, as well as recent progress made by tuna RFMOs towards adopting and implementing the MSE process. Discussions aimed to define the roles of managers, stakeholders and scientists in the MSE process, particularly as they relate to facilitating the completion of an MSE for North Pacific albacore tuna.

Alex Aires-da-Silva gave the presentation *“Progress towards implementing harvest strategies and MSE in the management of EPO tuna fisheries”*

Scientific Meetings

ISC- Albacore Working Group

Stock Assessment Workshop: Management Strategy Evaluation Mini-Workshop

20-22 April 2015, Shimizu-ku, Japan

Development of a MSE plan

We did not attend

[oral account given by Steve Teo, SWFSC/NOAA]

Working groups

tRFMO-MSE Working group

Organizer: Laurie Kell (ICCAT)

On line repository of MSE related code

Tentative meeting in 2015

N ALB ISC Working Group

Chair: John Holmes (DFO, CA)

Next meeting scheduled for July 2015

Dorado

Facilitator: Alex Aires-da-Silva

Tentative meeting Fall 2015

Publications

Published

Maunder, M.N. 2014. Management strategy evaluation (MSE) implementation in stock synthesis: Application to Pacific bluefin tuna. IATTC Stock Assessment Report 15: 100-117.

Develops a method to implement MSE using existing stock assessment implemented in Stock Synthesis and applies it to north Pacific Bluefin tuna.

Submitted

Carruthers, T. , Kell, L. , Butterworth, D. **Maunder, M.N.** Geromont, H. , Walters, C., McAllister, M. , Hillary, R. Levontin, P. Kitakado, T., Davies, C. Performance Review of Simple Management Procedures

Evaluates several simple harvest control rules applicable to data poor species under different sources of uncertainty.

Publications

In progress

Kell, K.T. Levontin, P. Davies, C., **Maunder, M.N.**, Pilling, G. Sharma, R. The quantification and presentation of risk

Book chapter in Management science in fisheries: a practical introduction to simulation-based methods

SAC document

Maunder, M. N. Zhu, J. , **Aires-da-Silva. A.** 2015. Preliminary Management Strategy Evaluation to evaluate the IATTC interim reference points and proposed harvest control rule. IATTC Document SAC-06-10b

Research proposals

Simulation testing of reference points

Objective: Assess the effectiveness and performance of the IATTC's target and limit interim reference points (RP) with regard to the principal sources of uncertainty. This project will develop simulation analyses to test the RPs under different sources of uncertainty. Given that the funding is inadequate to conduct a comprehensive MSE, the project will be limited to describing the sources of uncertainty and conducting a simulation analysis to evaluate a simplistic interpretation of the interim RPs and the informal HCR for a single species. The project will be contracted out, but with guidance and supervision by the IATTC staff. The tools developed in this project will be the basis for future MSE research.

Time frame: For final presentation at the 2017 SAC. Update given at the 2016 SAC

Research proposals

Management Strategy Evaluation

Objective: This project will develop simulation analysis to test the HCR and RPs under different sources of uncertainty. A comprehensive plan would comprise several components, as follows: Determine management objectives; Fully describe the sources of uncertainty including the type, magnitude, and probability of the uncertainty; Identify alternative HCRs and RPs; Determine how the HCR and RPs will be used in management including the data collected, assessment methods used, and management actions taken to comprise a full management strategy; Develop performance measures; Conduct the simulation analysis; Compare the performance of the alternative HCRs and RPs.

Time frame:

For final presentation at the 2018 SAC. Update given at the 2017 SAC.

Thank you!