

# COMISION INTERAMERICANA DEL ATUN TROPICAL (CIAT) INTER-AMERICAN TROPICAL TUNA COMMISSION (IATTC)

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## INTER-AMERICAN TROPICAL TUNA COMMISSION

### **1<sup>st</sup> WORKSHOP ON IMPROVING THE RISK ANALYSIS FOR TROPICAL TUNAS IN THE EASTERN PACIFIC OCEAN: MODEL DIAGNOSTICS IN INTEGRATED STOCK ASSESSMENTS**

By videoconference  
31 January-3 February 2022

## **ANNOUNCEMENT**

### **BACKGROUND AND OBJECTIVES**

Fisheries conservation and management decisions must take into consideration the persisting existence of a substantial uncertainty in fishery stock assessments. That uncertainty derives from multiple sources, such as sampling error, process variation, model structure uncertainty, parameter estimation uncertainty etc. It can occur in the way the population dynamic processes are understood or in the understanding of how the population is observed (the observation models). It is in that context that the Commission decided in its recently adopted Resolution C-21-04 to:

*“39. Review, during the year 2022, the weighting process and risk analysis implemented for bigeye tuna and yellowfin tuna (see documents SAC-11 INF-F, SAC-11-INF-J, SAC-11-06, and SAC-11-07) with emphasis on the impact on the management advice, taking care that this activity does not impact the research plan of the scientific staff as described in document SAC-12-01”*

As part of the implementation of that decision as well as of the IATTC project on improving the risk analysis for tropical tunas in the EPO, this first workshop will be held from 31 January to 3 February 2022 on the topic of “Model diagnostics in integrated stock assessments”. It will focus on defining and automating appropriate diagnostics, while a future workshop will focus on using the diagnostics in developing scores for risk analysis. The overall goal of the project is to develop more objective, transparent, and automated metrics for weighting fishery stock assessment model ensembles.

### **FORMAT**

This first workshop will be held by videoconference from 9 AM to 1 PM daily, San Diego (California) time.

As described in the attached provisional agenda, the workshop will comprise several presentations by invited speakers as well as ample time for discussion. The presentations will be pre-recorded and made available for viewing outside the workshop hours with the opportunity of the presenter providing a short 5-minute summary followed by 5 minutes of question time (these details may change based on the number of contributed presentations).

## INVITED SPEAKERS

Felipe Carvalho: Review of diagnostics  
Carolina Minte-Vera: ASPM and catch-curve analysis  
Hui-Hua Lee: R0 profile  
Jim Thorson: Residuals and effective sample size  
Chris Legault: Retrospective analysis  
Laurie Kell: Hind casting  
Paul Conn: Bayesian model checking  
Andrea Havron and Cole Monnahan: Random effect model validation  
Ian Taylor: Diagnostics in Stock Synthesis  
Henning Winker: Diagnostics automation and simulation testing  
Andre Punt: Summary

## PARTICIPATION AND ARRANGEMENTS

In view of the technical and informal nature of the workshop, it is open to all interested participants on an individual and personal basis and not informal representation of a CPC or another entity.

To facilitate this participation and make the necessary arrangements, a **registration form** will be posted on the meeting website to allow for participants to register individually.

The Workshop will utilize the Zoom platform. An invitation will be sent individually to each registered participant.

As indicated above, the Workshop will be held on **31 January 2021 to 3 February 2022**. Each session will have a duration of four hours and will start at **9 AM PDT (UTC -7)** to finalize around **1 PM PDT (UTC -7)**.

For the convenience of the participants, a document will be posted on the website with more precise indications on the ways the meeting will be conducted, taking into account the special requirements and limitations of videoconferencing, using as a model the similar documents that were used for previous IATTC meetings by videoconference.

**Languages:** English. There will be no simultaneous interpretation.

Annex: as indicated. -

## Tentative Agenda

(PDT [UTC -7]).

### **Day 1 (Monday Jan 31 2022)**

9:00 Introduction (Mark Maunder)

9:30 Review of diagnostics (Felipe Carvalho)

10:30 Residuals and effective sample size (Jim Thorson)

11:00 Break

11:30 Random effect model validation (Andrea Havron and Cole Monnahan)

12:00 Contributed talks and Discussion

### **Day 2 (Tuesday Feb 1 2022)**

9:00 Retrospective analysis (Chris Legault)

9:30 Hind casting (Laurie Kell)

10:00 Bayesian model checking (Paul Conn)

10:30 Contributed talks and Discussion

11:00 Break

11:30 Contributed talks and Discussion

### **Day 3 (Wednesday Feb 2 2022)**

9:00 ASPM and catch-curve analysis (Carolina Minte-Vera)

9:30 R0 profile (Hui-Hua Lee)

10:00 Contributed talks and Discussion

11:00 Break

11:30 Diagnostics in Stock Synthesis (Ian Taylor)

12:00 Diagnostics atomization and simulation testing (Henning Winker)

12:30 Contributed talks and Discussion

### **Day 4 (Thursday Feb 3 2022)**

9:00 Summary (Andre Punt)

10:00 Discussion and report writing

11:00 Break

11:30 Discussion and report writing