

## Proposal for a special session on Management Strategy Evaluation at the 18th Session of the Indian Ocean Tuna Commission Scientific Committee

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The complexity of the work on Management Strategy Evaluation (MSE) conducted through the Working Party on Methods (WPM) requires some extra effort at communication to both scientists and managers. For the first group, the meeting of IOTC's Scientific Committee (SC) is the best opportunity for explaining in detail the basis and results of the MSE work to the scientists that will likely pass on the SC results to managers attending the IOTC plenary. The need for some communication and capacity building exercise could be seen last year when the WPM chair was asked to give a brief crash course on MSE to the SC plenary.

We would like to propose here a special session on MSE to be held during the 18th Session of the IOTC SC, to be held from 23-27 November 2015 in Bali, Indonesia. Members of WPM, specially chair, vice-chair and researchers in charge of MSE development, would be responsible for running this session. The presence of other invited experts should be considered if necessary. If this proposal is endorsed by the WPM, the chair should liaise with the Secretariat and the chair of the SC to see how this can be accommodated in the SC meeting agenda.

Following this sessions, the scientists responsible for it will be available during the length of the SC session to clarify issues and answer any questions, and SC members will be encouraged to make use of this opportunity for furthering their understanding of MSE and quantitative fisheries science in general.

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## Objectives

- Familiarize the members of the SC with MSE ideas, principles and application to IOTC.
- Present, in further detail that the presentation of the WPM report to the SC allows, the current status of work on MSE discussed and reviewed by WPM 06.
- Discuss the possible links between WPM, SC and COM on the dialogue on management objectives that the MSE exercise depends on.
- Exchange views on the medium and long term implications of the adoption of Management Procedures for the work of the SC and its subsidiary Working Parties.

## Program of the session

The session is planned to be run over 2.5 h, with a coffee break in between. The following timetable assumes for illustration purposes that the session will start at 09.00 but this would have to be decided by SC chair and Secretariat.

### **09.00 - PRESENTATION on basic ideas and concepts used by MSE**

A simple and visually engaging presentation to cover the basic elements underpinning the use of MSE to evaluate Management Procedures. This should at least cover the following items:

- Operating Models
- Management Procedures and Harvest Control Rules
- Stochastic simulation
- Management objectives
- Performance indicators

### **09.30 - DEMONSTRATION on MSE**

The main ideas just presented will then be demonstrated with practical examples from the simulations exercises being conducted for IOTC stocks. Interactive exploration of the models and MPs will be possible using the tools that have already been developed.

The precise organization of this session needs to be agreed upon the responsible scientists, but it could be based on the development workflow of MSE outline in the initial presentation.

This second session will cover

- *Conditioning of operating models*, by looking at inputs and outputs of the conditioning procedure
- *Management Procedures*. Explore the behaviour of a management procedure under different states of nature and for alternative values of input parameters. Look at results of different example runs in the trade-off space.
- *Management objectives and performance indicators*. Examine a simplified table of performance indicators and how they link to possible management objectives. The difference and relationship between reference points and harvest control rule change points is demonstrated.
- *Comparison of MPs*. Using a set of objectives, MPs are compared and trade-offs explored.

### **10.30 - COFFEE BREAK**

### **11.00 - WRAP UP session, Questions & Answers**

A brief wrap session started by a recapitulation of the main issues, methods and ideas that were covered before, followed by an open Q&A session on MSE.

## **Expected outcome**

This session should increase the awareness and knowledge of the SC members to the work on MSE being conducted. Quantitative fisheries science is a complex subject, and although not all members of the IOTC community need to be equally familiar with the kind of analysis presented at the SC, their impact and consequences should be understood by all, most notably by those in the CPCs delegations that rely this information to managers and CPC representatives at the plenary sessions of IOTC.

We hope that the dialogue on management objectives and procedures that IOTC has been carried out, is further facilitated by the increased familiarity with MSE of the Scientific Committee, the central body of IOTC's scientific advice system.