
APPENDIX IV

DRAFT WORKPLAN FOR A MANAGEMENT STRATEGY EVALUATION FOR IOTC STOCKS FOR 2013

The Fourth Session of the IOTC Working Party on Methods (WPM) is proposing a workplan to carry out the tasks on the evaluation of management plans for IOTC stocks, as required by the Scientific Committee (SC). This workplan outlines the main tasks to be carried out over the next year, with a view to present initial results at the 2013 meeting of the SC. It also presents some of the initial ideas on the overall structure of the simulation models to be assembled, an estimate of the workload involved, and a budget covering consultancy work, travel expenses and infrastructure costs.

Tasks

Development of a set of relatively simple operating models will be the main task for the group. Representations of the stock and main fisheries will be assembled, by using the latest stock assessments as a starting point, but simplifying as much as possible some of the dynamics. This should enable the group to obtain in a relatively short time period, a platform for a first set of analyses, that could also be used for demonstration purposes.

Assemblage of Operating Models

Example: Operating Model for Indian Ocean Albacore

An operating model for the Indian Ocean albacore fishery will be constructed by using the estimated population variables from the latest stock assessment from the IOTC Working Party on Temperate Tunas (IOTC-2012-WPTmT04-11). The general structure of the model will include:

- A single area and stock unit
- Age-structured population model
- 5 fleets
- 3 CPUE series

Operating model for Indian Ocean tropical tuna

A set of three operating models will be constructed for the tropical tuna stocks (bigeye tuna, skipjack tuna and yellowfin tuna). These models will not have any link at the population levels, i.e. they will be conditioned independently, but will be exploited by the same fleets, and affected by the same management decisions. The initial models will be simpler than current assessment models, specially by not incorporating any spatial complexity. The initial set of models will cover either the whole Indian Ocean or simply the western area (as a trial), and include only three fleets by aggregating a number of coastal and semi-industrial fisheries.

Setup of simulation infrastructure

The necessary infrastructure to carry out the simulations involved in this work, in terms of a software platform and a set of input and output methods, will be put together, hosted at the EC JRC and available to participants over the web. The framework formulated for the development and testing of the albacore model will then be used for other simulations.

Development of training material on MSE

A set of training material on MSE, targeted at both scientists and managers, will be developed for use at various meetings. This work will be carried out in collaboration with the development of similar training material that the IOTC Secretariat is currently involved in developing for other areas of IOTC science capacity building.

Expected deliverables

Progress by the WPM in the development of MSE analyses will be reported to the IOTC SC in 2013. In addition, a series of deliverables have been set for the next year:

- May 2013
 - Initial operating model for albacore
 - First run of robustness trials for albacore operating model
- October 2013
 - Progress report on tropical tunas operating model

- First set of runs on albacore MSE
- Analysis of albacore reference points
- December 2013
 - Progress report of WPM presented at SC meeting
 - Demonstration of simulation framework, albacore operating model and initial results to the SC meeting

Intersessional meetings

Two intersessional meetings should take place in 2013, in the second and fourth quarters of the 2013 calendar year. The meetings are designed to involve the core team that will be carrying out the programming, as the focus will be on reviewing in detail the development carried out, agree on implementation details, and solve problems encountered with models and code. A progress report will be released after each meeting and discussed via the WPM emailing list.

Second quarter meeting. April 2013, EC JRC (Italy)

1. Review and finalize ALB OM
2. Carry out initial tests of ALB RPs
3. Start robustness trials of ALB CPUEs

Fourth quarter meeting. October 2013, WPTT (as applicable)

1. Assess progress on tropical tunas operating models
2. Conduct and examine first set of runs on albacore MSE
3. Assess results of albacore reference points analysis
4. Agree on development for tropical tuna operating models

Budget

The work to be carried out by WPM would require some extra-budgetary contributions from the IOTC. The total estimated extra-budgetary contributions would be approximately US\$30,000–\$40,000, with the exact figure to be determined by the SC, and would be comprised of the following three types of expenses:

1) Work of a consultant with expertise on population and fisheries models relating to MSE

The work to be carried out relates to the development of operating models of applicable tuna stocks. Initial terms of reference for this contract should include:

- Assistance in the development of operating models from stock assessment results
- Parameterisation of operating models from alternative sources of data
- Design of robustness trials and alternative scenarios
- Participation in the analyses of the robustness and suitability of reference points
- Collaboration in the design and implementation of harvest control rules

<i>Description</i>	<i>Amount (US\$)</i>
Consultant fees for 30 days (\$TBD/day)	TBD
Travel costs	TBD

2) Support for travel to intersessional meeting

The second quarter intersessional meeting might require the provision of travel funds for up to three participants. The Chair and Vice-Chair of the WPM shall act as the selection panel for those to receive the travel assistance funds based on their technical expertise.

<i>Description</i>	<i>Amount (US\$)</i>
Airfares x 3	6,000
DSA x 3 for 5 days (\$327/day)	4,905

3) Access to High Performance Computing facilities

The simulation work involved in this workplan requires the use of High Performance Computing facilities in order to carry out the large number of simulations involved. Although certain facilities exist at various scientific institutions associated with this work, they might not be sufficient, or available when necessary, so provision should be made for funds that would enable access to High Performance Computing facilities elsewhere.

<i>Description</i>	<i>Amount (US\$)</i>
Annual costs	1,000