



Consideration of Exceptional Circumstances processes in the IOTC

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Contents

Acknowledgments.....	iv
Executive summary.....	1
1 Introduction.....	1
2 Explanation of exceptional circumstances.....	2
3 Process adopted in other tuna RFMOs and fisheries Commissions.....	3
4 Guidelines.....	5
References.....	6

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Executive summary

The Working Party on Methods (WPM) 2020 meeting requested intersessional work on the definition of exceptional circumstances. This paper defines types of exceptional circumstances conditions and actions that can be considered, and the process adopted in other Regional Fisheries Management Organisations (RFMOs). Draft guidelines for the Provision of Exceptional Circumstances in IOTC are provided for consideration as part of the formulation for adoption of a management procedure (MP). The provisions for exceptional circumstances provide a scientific process for handling any concerns with implementing the MP and provide transparency in Total Allowable Catch (TAC) decision making by the Commission.

1 Introduction

The Working Party on Methods (WPM) 2020 meeting requested intersessional work on the definition of exceptional circumstances:

“60. The WPM NOTED that a similar exercise should be carried out more generally on the definition of exceptional circumstances. The WPM NOTED that future resolutions implementing management procedures should contain a precise definition of the circumstances under which the procedure should not be applied. The WPM AGREED that work should be carried out inter-sessionally on those elements that relate to the elements in a management procedure being tested by WPM. The WPM AGREED the group should report back to WPM in 2021.”

The WPM glossary definition of Exceptional circumstances is: *“Specifications of circumstances (primarily related to future monitoring data falling outside the range covered by simulation testing) where overriding of the output from a Management Procedure should be considered, together with broad principles to govern the action to take in such an event.”*

This paper provides an explanation of exceptional circumstances conditions and types of actions that can be considered, the process adopted in other Regional Fisheries Management Organisations (RFMOs) and suggests guidelines to consider as part of the formulation for adoption of a management procedure (MP). The provisions for exceptional circumstances provide a scientific process for handling any concerns with implementing the MP and provides transparency in Total Allowable Catch (TAC) decisions.

2 Explanation of exceptional circumstances

When a management procedure is adopted, the Scientific Committee (SC) will use the MP to calculate the TAC advice. It is important to check for any exceptional circumstances or conditions which would make implementation of the TAC advice risky or inappropriate. If there are concerns or exceptional circumstances, a process can be followed to evaluate the severity and impact of the exceptional circumstance and recommend an appropriate action or actions.

The types of exceptional circumstances that are commonly considered, fall into three categories:

1. Information on the stock, fishing operations, population dynamics parameters, or biology that is outside the range considered during MSE testing of the adopted MP.
2. Input data to the MP that are missing, have changed, or outside the range simulated in the MSE.
3. Implementation of the MP that is inconsistent with the MP advice (e.g. total catch is greater than the TAC recommended by the MP).

Exceptional circumstances are intentionally broadly specified, so that a range of unanticipated issues can be addressed. Hard bounds can be useful to determine whether an exceptional circumstance has occurred. The 90% or 95% probability interval from the projections in the MSE can be used as the bounds to determine if an index or measure of the stock or fishery is outside the range tested, but any unusual or unexpected results should be further investigated. For example, if the CPUE index to be used in the MP is outside the range of predicted values used in the MSE when the MP was adopted, then this would trigger exceptional circumstances. Or, if the latest stock assessment indicates that recent recruitment is below the range of values predicted in the MSE, then this would trigger exceptional circumstances.

The severity of the exceptional circumstances for the operation of the MP needs to be considered, noting that impacts can be both negative and positive. For example, a high estimate of recruitment that is outside the 90% bounds of the estimates in MSE projections is a positive exceptional circumstance which is likely to have a positive impact on the stock, and if recruitment data are not used directly in the MP then there is no impact on TAC recommendation. If the CPUE index used in the MP is anomalously low (i.e. below the 95% probability bounds from the MSE), then it may be indicating a concerning situation for the stock (high severity) and will also have an impact on the recommended TAC. Individual exceptional circumstances are examined, but the combined, and cumulative impacts can also be considered. If necessary, additional information may be required to determine the scale of the impact and could be used to define advice on actions.

The actions that can be taken in relation to exceptional circumstances can include gathering more information or doing more research, triggering an earlier review of the MP than planned, and considering a change to the TAC if there is a very high risk to the stock. If the TAC is to be adjusted, exceptional circumstances provisions can provide guidance on how to calculate these. In most Fisheries Commissions this detail is not specified as other actions are preferred. In the CCSBT case, where there is a more detailed guidance on how to change TAC, it has never been used by the SC.

3 Process adopted in other tuna RFMOs and fisheries Commissions

The joint tuna RFMO MSE working group discussed exceptional circumstances provision in 2018 (Anon 2018), recognising that a safety-net around MP implementation was essential, but that changes to MP recommended TAC should be an uncommon event, as one of the aims of adopting an MP is to avoid TAC negotiation. The tuna RFMOs and fisheries commissions have adopted, or have started developing, very similar exceptional circumstances provisions (Arrizabalaga et al., 2018). The main difference is in the detailed specification of determination of actions to be taken.

The CCSBT has adopted meta-rules that specify the exceptional circumstances provisions, as well as the schedule of events for implementation of the MP (Anon 2020). A process is defined for *“determining whether exceptional circumstances exist and whether the implication(s) arising from them is sufficiently severe to warrant revising the TAC advice from the MP”*. Each year the Extended Scientific Committee reviews stock and fishery indicators, considers whether the inputs to the MP are affected, if the population dynamics are potentially substantially different from those for which the MP was tested (as defined by the 2019 Reference set of operating models, OMs), if the fishery or fishing operations have changed substantially, or if recent total catches have been greater than the MP recommended TAC. If there is evidence for exceptional circumstances, the ESC considers the severity of the exceptional circumstances (for example, how severely “outside of the 95% probability interval bounds” is the CPUE) and examines the potential impacts on the performance of the MP. A process and guidelines for action are defined. In practice, the SC advice to the Commission has only recommended action to collect and review additional information or review the MP since the first MP was adopted in 2011. Exceptional circumstances have not been severe enough to warrant an immediate change in TAC. The meta-rules schedule of events includes an annual review of exceptional circumstances, annual review of indicators, specifies timing of running the adopted MP (3 years), when a stock assessment should be conducted (3 years, and off-set from the MP TAC setting year), and the timeframe for MP review (after 6 years).

At WCPFC the exceptional circumstances provisions are in discussion, and Scott et al. (2019) noted: *“A key part of the monitoring strategy is the identification and agreement by stakeholders of situations within the fishery, or stock, that are termed ‘exceptional circumstances’. These are events that fall outside the range of assumptions over which the adopted MP has been tested. Exceptional circumstances should be agreed prior to implementation of the selected MP and be defined in broad terms. If exceptional circumstances occur it will be necessary to revisit the MP and determine future action.”*

At ICCAT, exceptional circumstances provisions have been drafted for adoption with the Northern Albacore MP (ICCAT 2021 (Appendix 10, 2021_PA2 report)). The focus is on whether the stock is in a state that was not considered in the MSE, and if data for the HCR are not available or are not appropriate. The provisions also specify the timing for reviewing different indicators, which is related to the annual review of fishery and biological information, implementation of the HCR every 3 years, and the 6–7 year cycle for a full stock assessment.

At NAFO: *“It was determined that “exceptional circumstances” occur when a resource moves outside the range of parameters compatible with the various scenarios considered in the MSE simulation testing, on which selection of the management strategy for that resource was founded. If “exceptional circumstances” are occurring, a review and possible revision of the HCR may be necessary.”* The exceptional circumstances that are identified in the NAFO Exceptional Circumstances protocol (NAFO, 2011) are: data gaps, new biological parameters, and substantial changes in recruitment, fishing mortality or biomass estimates relative to the range considered in MSE. The SC can also identify any other situation that warrants consideration as exceptional circumstances. NAFO define the 90% probability interval of the MSE projections estimates as the range. If exceptional circumstances are identified the NAFO protocol emphasises the need to continue to use the MS where possible to set TAC. This intention is similar in the CCSBT meta-rules which include real examples that the CCSBT SC has encountered to demonstrate that intention. The NAFO protocol guides the SC to consider actions in the following steps: 1) Continue to implement the existing Management Strategy and recommend additional research or monitoring to determine whether to move to step 2; 2) Continue with MS implementation and trigger a review of the MS; 3) Set a catch limit that departs from the MS, and revise the MS.

4 Guidelines

The following draft text is suggested as the structure for 'Provision for exceptional circumstances at IOTC' for application when implementing Management Procedures or Harvest Control Rules for IOTC fisheries. This text has used the IOTC definition of exceptional circumstances and paraphrases the conditions adopted in other RFMOs. It is a generic provision for exceptional circumstances that could apply for any MP adopted and implemented by the IOTC.

DRAFT:

The 'Provisions for exceptional circumstances' provide a scientific process for managing any concerns with implementing the MP TAC advice and provides for transparency in TAC decision making by the Commission. These 'Provisions' guide the process for determining whether any exceptional circumstances exist and the severity of the exceptional circumstance in terms of the objectives of the MP or HCR, and if necessary, what types of actions could be taken. Actions can include review of the MP, more research, or precautionary changes to the TAC.

Exceptional circumstances are *"... circumstances (primarily related to future monitoring data falling outside the range covered by simulation testing) where overriding of the output from a Management Procedure should be considered..."*

These provisions provide *"... broad principles to govern the action to take in such an event."*

Each year, the SC will review the following items for evidence of exceptional circumstances:

1. Information on the stock, fishing operations, population dynamics parameters, or biology that is outside the range (95% probability interval from MSE projections) considered during MSE testing of the adopted MP.
2. Input data to the MP that are missing, have changed, or outside the range simulated in the MSE.
3. Implementation of the MP that is inconsistent with the MP advice (e.g. total catch is greater than the TAC recommended by the MP).

If there is evidence for exceptional circumstances the SC will review the potential impact and severity on implementation and performance of the MP.

The SC will provide advice on the action required, such as a review of the MP or collection of ancillary data to be reviewed.

If there is a very high potential impact the SC will consider TAC changes. TAC change can be determined by an x% change to the TAC, where the x% is based on an urgently updated assessment and projections.

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