ON A MANAGEMENT PROCEDURE FOR SKIPJACK TUNA IN THE IOTC AREA OF COMPETENCE

SUBMITTED BY: EUROPEAN UNION

EXPLANATORY MEMORANDUM

The European Union is proposing the adoption of a Management Procedure for skipjack, based on the work of the IOTC scientific bodies and the exchanges taking place in the TCMP.

The draft resolution thus aims to finalise the work undertaken in previous years with the direct involvement of several CPCs to develop a management procedure for the definition of catch limits for skipjack. Once adopted the MP will allow the Commission to define a mechanism to implement the MP derived TAC no later than 2026, if an allocation scheme has not yet been agreed and implemented by the Commission.

The pending elements put in brackets in this proposal will be finalised following the conclusions of the 8th meeting of the TCMP on 10-11 May 2024.

RESOLUTION 24/XX
ON A MANAGEMENT PROCEDURE FOR SKIPJACK TUNA IN THE IOTC AREA OF COMPETENCE

Keywords: Skipjack tuna, Management Procedure, Harvest Strategy, Target Reference Point, MSY

The Indian Ocean Tuna Commission (IOTC),

HAVING responsibility for the conservation and optimum utilization of tuna and tuna-like species in the Indian Ocean;

RECOGNISING the need for action to ensure the achievement of IOTC objectives to conserve and manage tuna resources in the IOTC area of competence;

RECOGNISING the adopted management objectives of the Commission set out in Resolution 15/10 are to: 1) maintain the biomass at or above levels required to produce MSY or its proxy, 2) maintain the fishing mortality rate at or below F_{MSY} or its proxy, and 3) avoid the biomass being below B_{LIM} and the fishing mortality rate being above F_{LIM};

MINDFUL of Article XVI of the IOTC Agreement regarding the rights of Coastal States and of Articles 87 and 116 of the UN Convention on the Law of the Sea regarding the right to fish on the high seas;

RECOGNISING the special requirements of developing States, particularly Small Island developing States, in Article 24 of the Agreement for the Implementation of the Provisions of the

United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA);

RECOGNISING Resolution 12/01 On the implementation of the precautionary approach calls on the Indian Ocean Tuna Commission to implement and apply the precautionary approach, in accordance with Article 6 of UNFSA;

RECALLING Resolution 15/10 On Target and Limit Reference Points and a Decision Framework, which identifies objectives of the Commission to maintain stocks in perpetuity and with high probability, at levels not less than those capable of producing their maximum sustainable yield (MSY) as qualified by relevant environmental and economic factors including the special requirements of developing States in the IOTC area of competence; and identifies reference points for IOTC stocks including skipjack tuna;

RECOGNIZING the intent of the Commission to adopt management procedures aimed at achieving the objectives of the IOTC Agreement (Resolution 15/10) aided by advice of the Technical Committee on Management Procedures (TCMP), as established in Resolution 16/09 and as further expounded in the Schedule of work for the development of management procedures for key species in the IOTC Area;

ACKNOWLEDGING the Scientific Committee advice that the most recent stock assessment in 2023 determined skipjack tuna is not overfished and is not subject to overfishing;

FURTHER ACKNOWLEDGING that recommended catch limits for skipjack tuna for the period 2024-2026 were established during the 25h meeting of the Scientific Committee using the Harvest Control Rule described in Resolution 21/03.

FURTHER CONSIDERING the endorsement of the skipjack tuna Management Strategy Evaluation framework by the 25th meeting of the Scientific Committee (December 2023) and the SC25's advice to evaluate Candidate Management Procedures (CMP) with a new set of Operating Models developed from the 2023 stock assessment of skipjack.

FURTHER CONSIDERING the endorsement of the 7th and 8th sessions of the Technical Committee on Management Procedures (TCMP) regarding the evaluation of CMPs for skipjack, which included a shortlist of CMPs that achieve the management objectives of maintaining the stock in the green quadrant of the Kobe plot with more than [xx]%.

ADOPTS, in accordance with the provisions of Article IX, paragraph 1 of the IOTC Agreement:

1. A management procedure for the skipjack tuna stock managed by the IOTC with a view of maintaining the stock biomass in the green zone of the Kobe plot (not overfished and not subject to overfishing) with high probability while maximizing the average catch from the fishery and reducing the variation in the total allowable catch (TAC) between management periods.

Management procedure

2. The adopted management procedure for skipjack tuna known as MP-SKJ is described in Annex I (MP).

3. [Consistent with the adopted management objectives of the Commission, the management procedure is designed to achieve:

   a) a 50% probability that the skipjack tuna spawning stock biomass achieves the biomass level of 0.4 x SB_0 by 2030-2034.

   b) the skipjack tuna spawning stock biomass is maintained above the biomass of SB_{MSY} with a probability of at least 70% by 2030-2034.

   c) the skipjack tuna spawning stock biomass is maintained above the biomass of 0.2 x SB_0 by 2030-2034 by xx%.

   and operates with the following constraint:

   d) the maximum increase or decrease of TAC shall be of (+15% or -10%) relative to the previous TAC.]

Estimation of TAC

4. The Scientific Committee shall run the MP and advise the Commission of the outcome, including a recommended TAC and any advice on exceptional circumstances in accordance with the Commission endorsed Guidelines for the Provisions of Exceptional Circumstances for IOTC MPs as documented in [Appendix xx of IOTC-202x-xx].

5. The Commission shall adopt the TAC based on the outcome of the MP, unless the Scientific Committee identifies exceptional circumstances that require consideration of alternate management actions to be taken by the Commission.

6. The first TAC derived from the MP shall apply in 2027, 2028 and 2029.

7. The TAC shall apply every three years following the year it is set by the Commission.

8. The MP will be run for the first time in 2025 to estimate the TAC for the period 2027-2029.

9. Thereafter, the MP will be applied every three years.

10. If exceptional circumstances are triggered, the pre-existing TAC shall remain in place until a new TAC or other management action is agreed by the Commission.

TAC allocation

11. Allocation of the TAC among CPCs will take place according to an agreed process external to this measure.

12. The Commission will develop a mechanism to constrain catch to the MP derived TAC for skipjack tuna no later than 2026, if an allocation scheme has not yet been agreed and implemented by the Commission.

Review

13. A review of performance of the MP by the Commission and its subcommittees is to occur in 2032. The aim of the review is to ensure the MP is performing as expected and whether there are any conditions that warrant reconditioning the operating models, retuning the existing MP, or consideration of alternate candidate MPs and a new full management strategy evaluation.

14. The Scientific Committee is requested to review, and if necessary, further develop and refine (not later than 2026), the exceptional circumstances guidelines (adopted by SC27 and S30), taking into account, inter alia, the need for an appropriate balance between specificity versus flexibility in defining exceptional circumstances, and the appropriate level of robustness to ensure that exceptional circumstances are triggered only when necessary.

15. The IOTC, through the Technical Committee on Management Procedures, is requested to review the need for, and if necessary, develop at latest by 2026, guidance on a range of appropriate management responses should those exceptional circumstances be found to occur.

[ANNEX I

DESCRIPTION AND FORMULAE FOR CALCULATING TACS FOR MP-SKJ

The MP-SKJ is empirical and uses two main components to estimate catch limits: (i) the stock status indicator and, (ii) the decision algorithm (or harvest control rule, HCR), including tuning parameters (see Table 1 for a complete description of terms and values used).

Table 1. Terms used for the description of the MP.

Notation	Value	Description
U_{SB0}	XX	Stock status indicator value that corresponds to an unexploited stock.
U_t	Calculated every 3 years	Stock status indicator for the year *t*. It is the mean of the log-normalised pole and line and purse seine (log-school) CPUE abundance indices. These indices are standardized from the processed described in *xxx et al (2023)* and *yyy et al (2023)* applied to catch and effort data from xxx and yyy respectively to the most recent data available.
$U_{threshold} = xx\%\ U_{SB0}$	-xx	Threshold stock status indicator from which catch is decreased from its maximum value.
$U_{safety} = xx\%\ U_{SB0}$	-xx	Safety level for stock status indicator. Non-subsistence fisheries will be closed if the stock status indicator falls below this value.
$TAC_{t+1:3}$	Calculated every 3 years	Total Allowable Catch for the period t+1 to t+3.
$TAC_{max} = C_{Uthreshold}$	YY	Maximum TAC when the stock status indicator is above the threshold level. It is the catch associated with the threshold stock status indicator value ($U_{threshold}$).
TAC_{min}	10% TAC_{max}	Minimum TAC when the stock status indicator is below the safety level.

(i) The stock status indicator U_t is estimated from the pole and line purse seine (log-school) catch per unit of effort (CPUE) indices.

(ii) The decision algorithm or HCR estimates the recommended catch limit TAC for the period (t+1:3) using the stock status indicator (U_t) as follows:

    a) If $U_t \geq U_{threshold}$ then $TAC_{t+1:3} = C_{max}$;

    b) If $U_{safety} \leq U_t \leq U_{threshold}$; then $TAC_{t+1:3} = (C_{max} - C_{min})\ x\ \frac{(U_t - U_{safety})}{(U_{threshold} - U_{safety})} + C_{min}$;

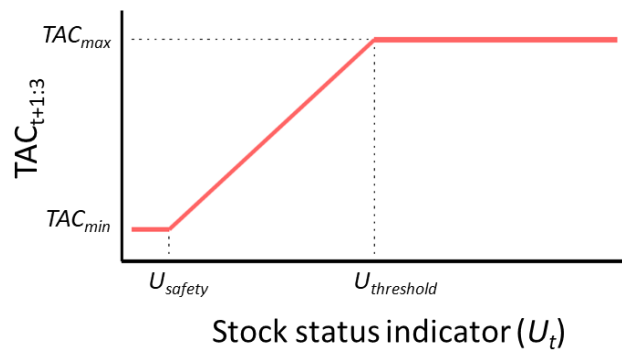   c) If $a_t \leq U_{safety}$; $TAC_{t+1:3} = C_{min}$

Figure 1. Schematic representation of the empirical Harvest Control Rule.]