Indian Ocean Tuna Commission

MANAGEMENT STRATEGY EVALUATION TASK FORCE OF THE 16th WORKING PARTY ON METHODS

Chair: Hilario Murua (ISSF)

Vice-chair: Ann Preece (CSIRO)

24 February 2025, Online

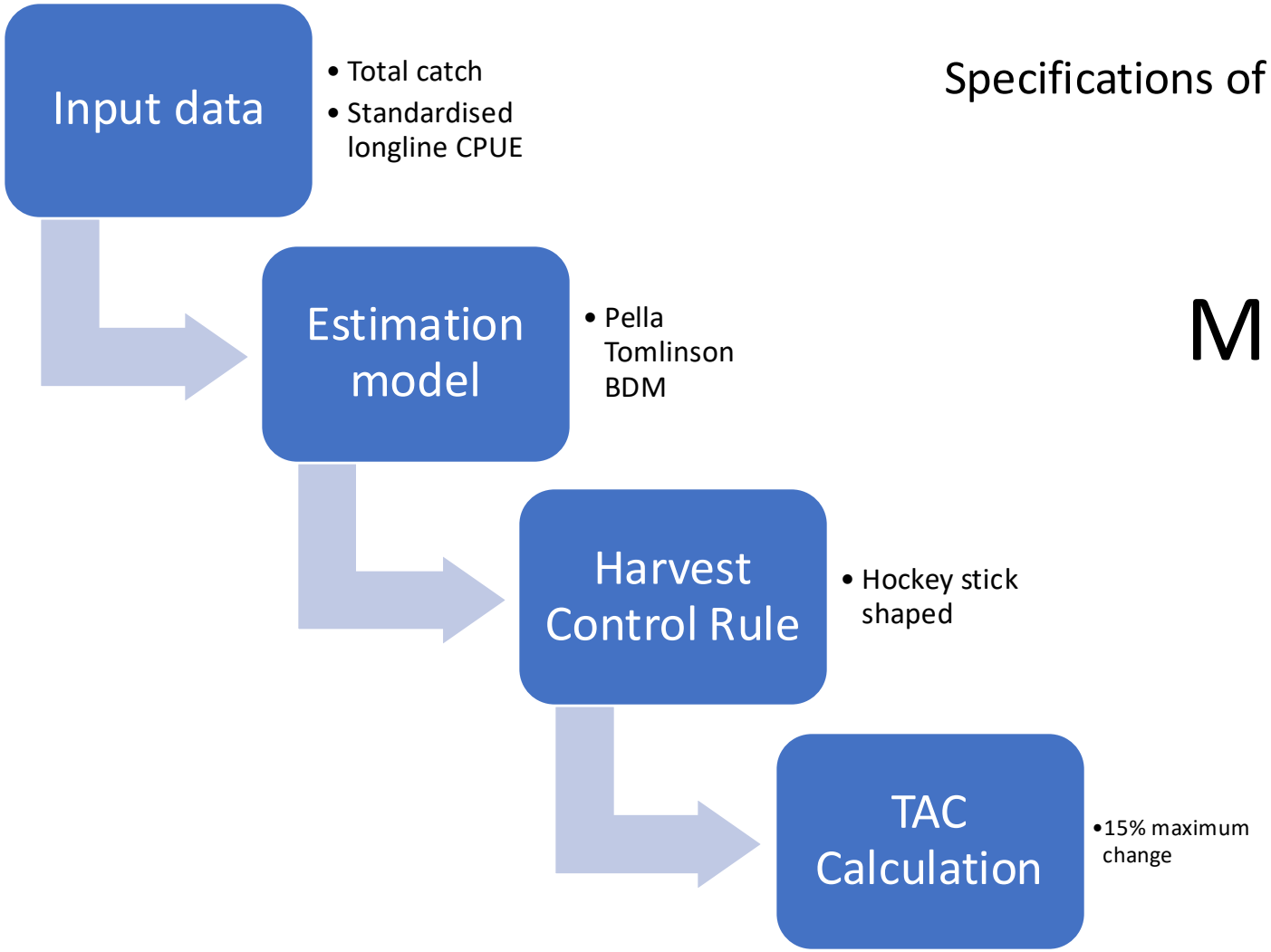
WPM(MSE) AGENDA

1. **Opening and adoption of agenda**
2. **Review of MP process in IOTC**
3. **Status of work on Albacore OMs and MPs**
    1. Review progress and difficulties
    2. Future work
    3. Preparation of the 9th session of TCMP
4. **Bigeye Tuna MP (Resolution 22/03)**
    1. Running the Bigeye MP as per Resolution 22/03 (**CPUE WD #4, MP WD #2**)
    2. Review of exceptional circumstances (**WD #3**)
    3. External peer-review
5. **Development of blue shark OMs and MPs**
    1. Future workplan
6. **Preparation of TCMP09 and Commission (S29)**
    1. Agenda for TCMP09
    2. Capacity building on MSE at IOTC
7. **Other business**
8. **Adoption of Report**

BET Management Procedure

- Bigeye tuna MP adopted in 2022 (Res 22/03)
- MP run in 2022 to set TAC for 2024 and 2025 (80,583 t)
- MP was scheduled to be applied again in 2024 to set TAC for 2026-2028
- CPUE index required to run MP was not available in 2024 as per Res 22/03 requirements
- Joint CPUE team reconvened in Feb 2025 to produce the required CPUE index
- the WPM(MSE) Taskforce met online on 24 February 2025 to review the CPUE, run MP based on the new CPUE, review again EC, and provide catch **RECOMMENDATION to the SC.**

BET Management Procedure



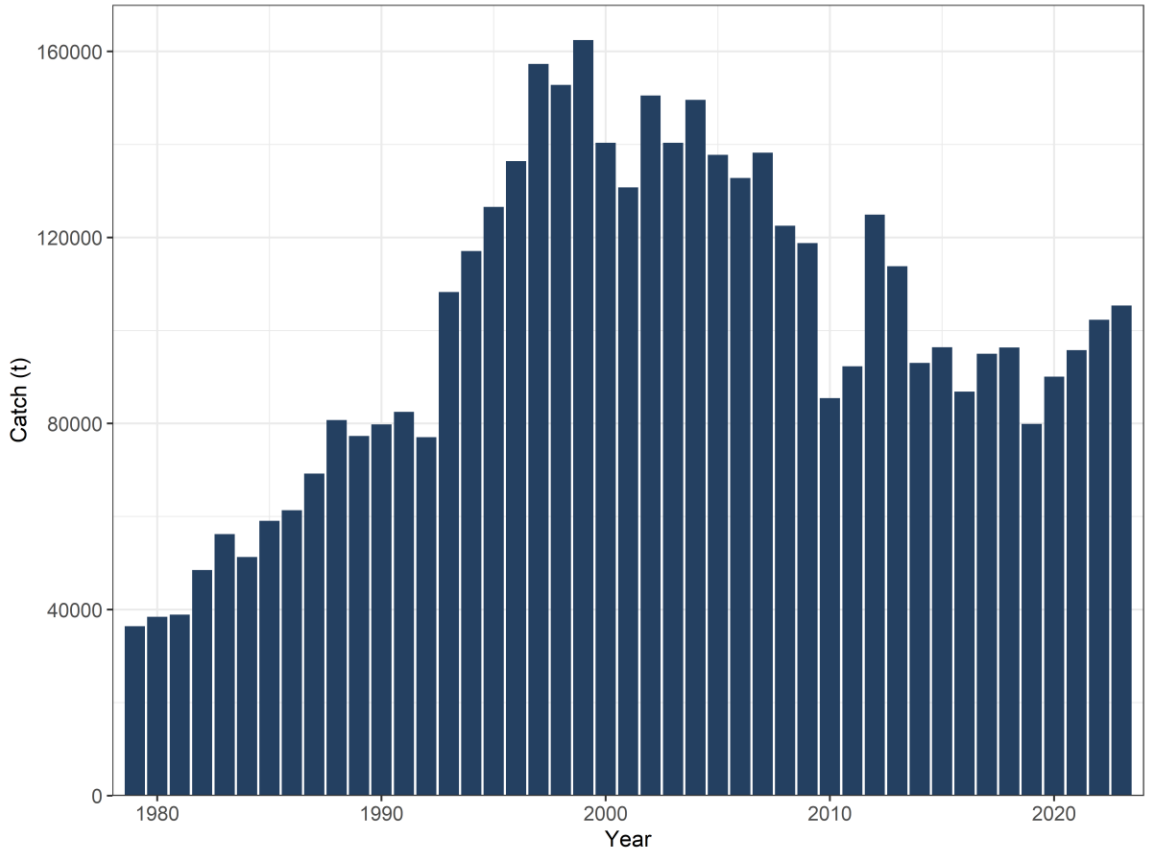
Specifications of MP in IOTC-2022-WPM13-11_Rev1

MP COMPONENTS

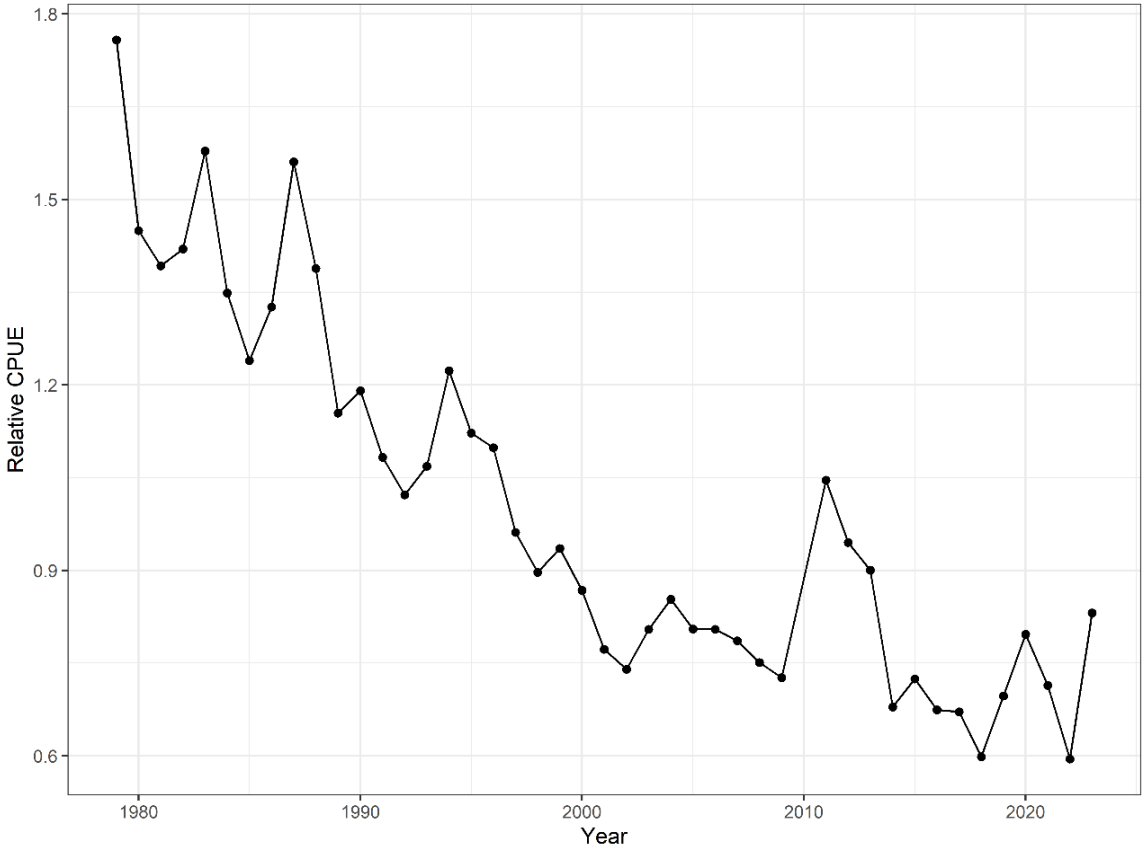
BET Management Procedure

Catch data

2023 catch = 105,369 t

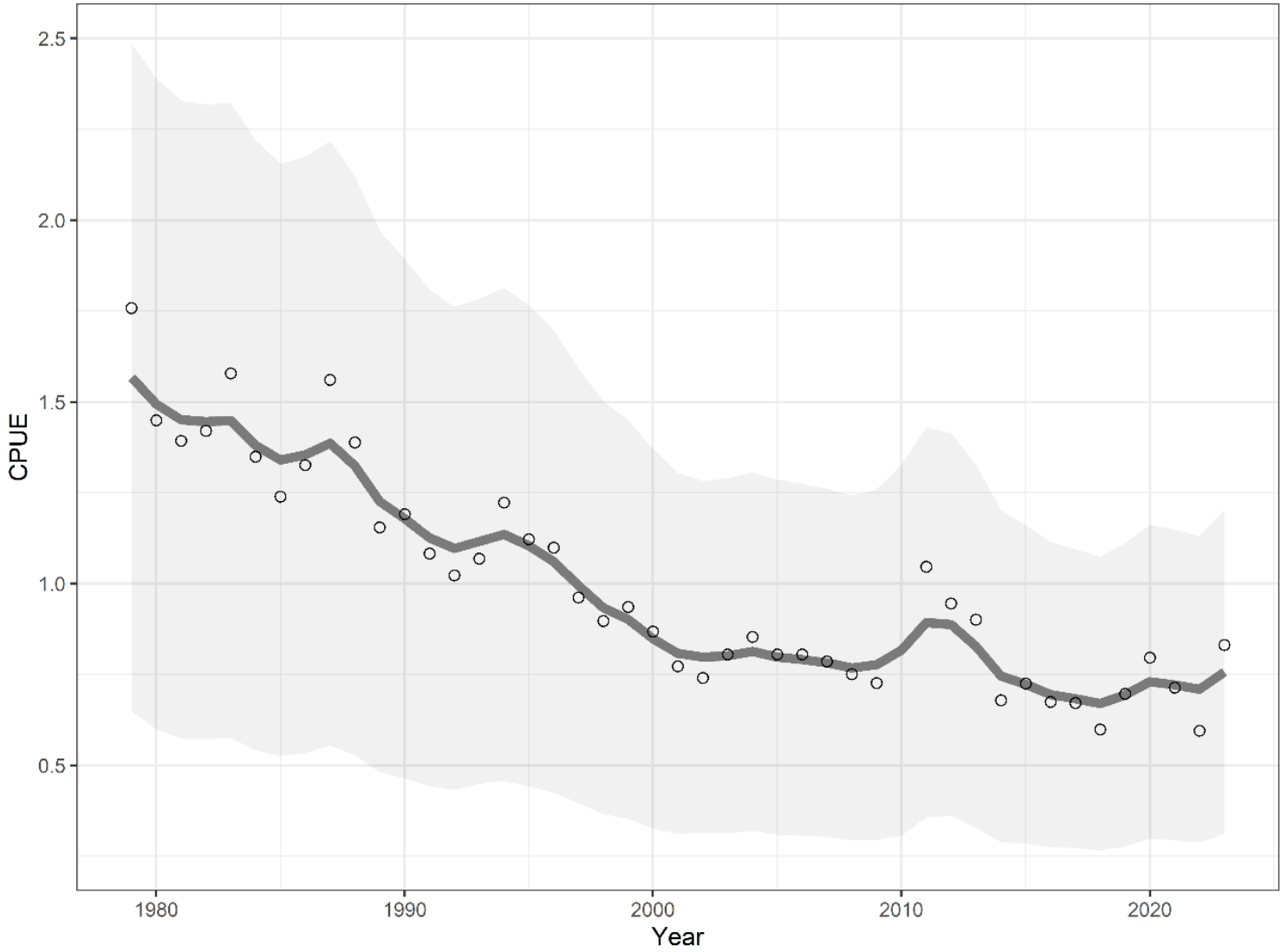


CPUE data



Estimation model fit to CPUE

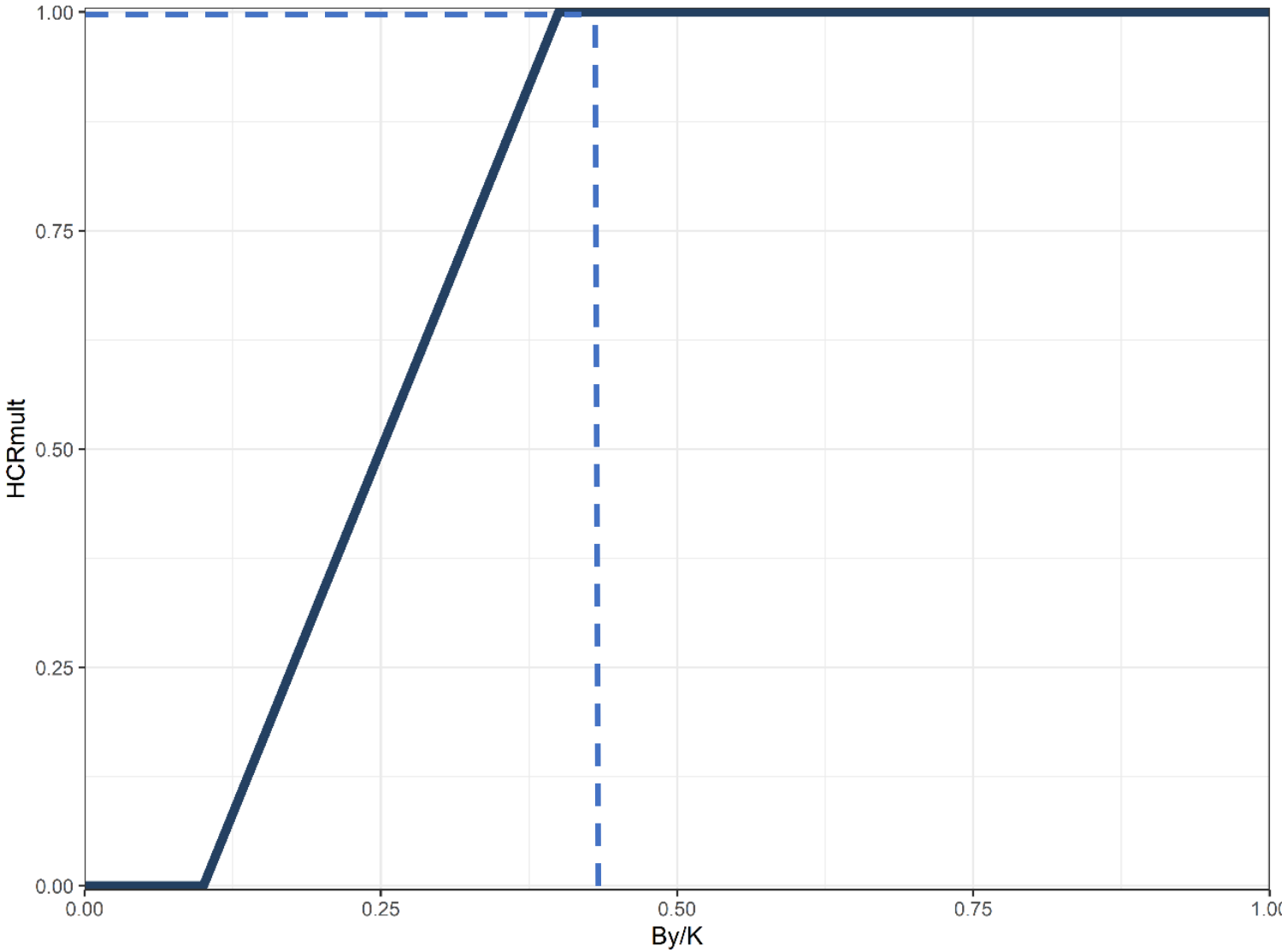
- Model converged
- Robust to different starting values



Harvest Control Rule (HCR)

Estimation model parameter estimates

B_y	= 750,170 t
K	= 1,811,442 t
B_y/K	= 0.414
HCR_{mult}	= 1



Calculation of TAC

$$TAC_{new} = B_y\left(1 - exp(-F_{mult} \times HCR_{mult} \times F_{MSY}\, ratio)\right)$$

B_y = 750,170 t

F_{mult} = 3.178 (fixed tuning parameter)

HCR_{mult} = 1

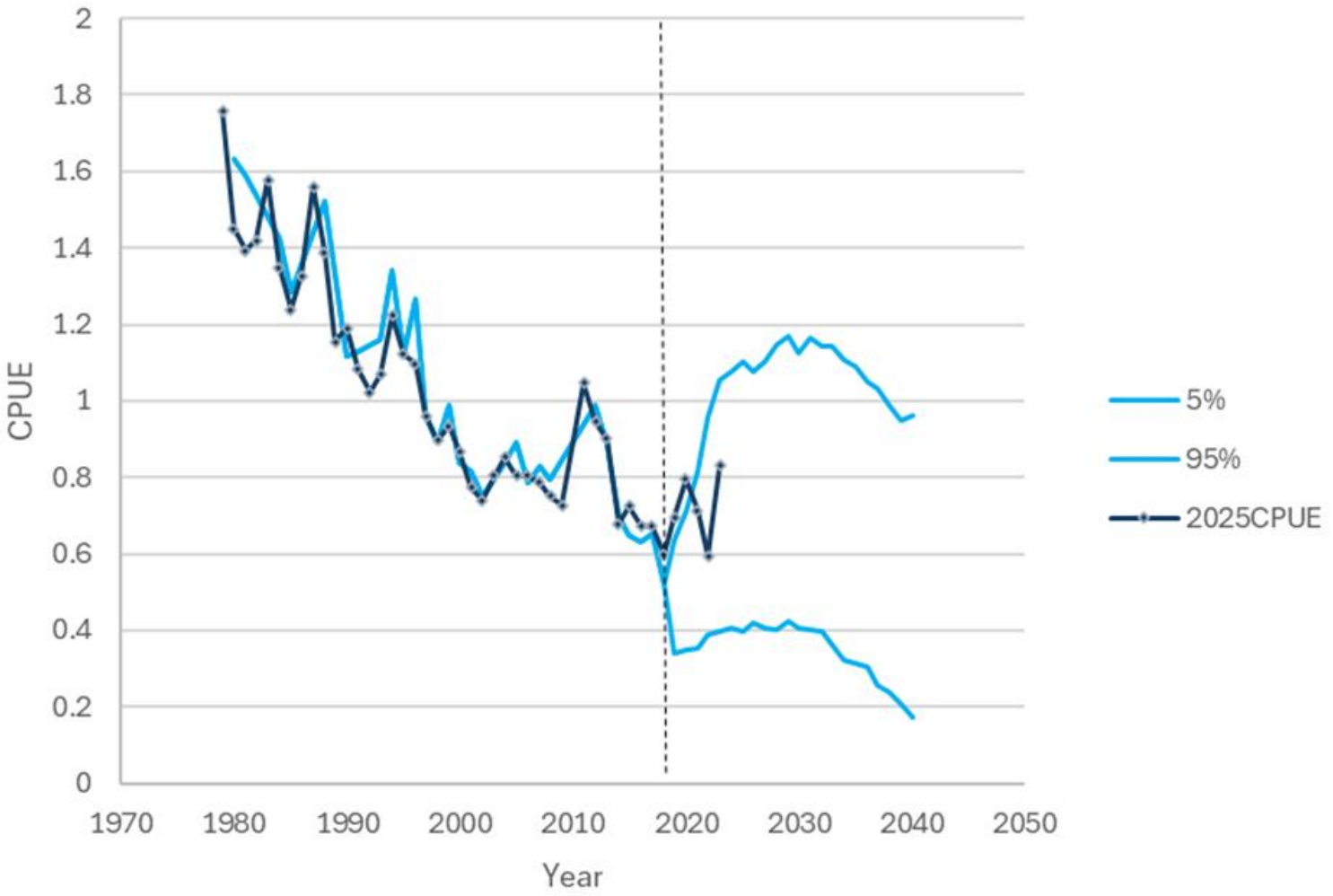
$F_{MSY}\, ratio$ = 0.071447

TAC_{new} = 175,005 t (>15% higher than current TAC of 80,583 t)

Recommended TAC = 92,670 t (15% above current TAC)

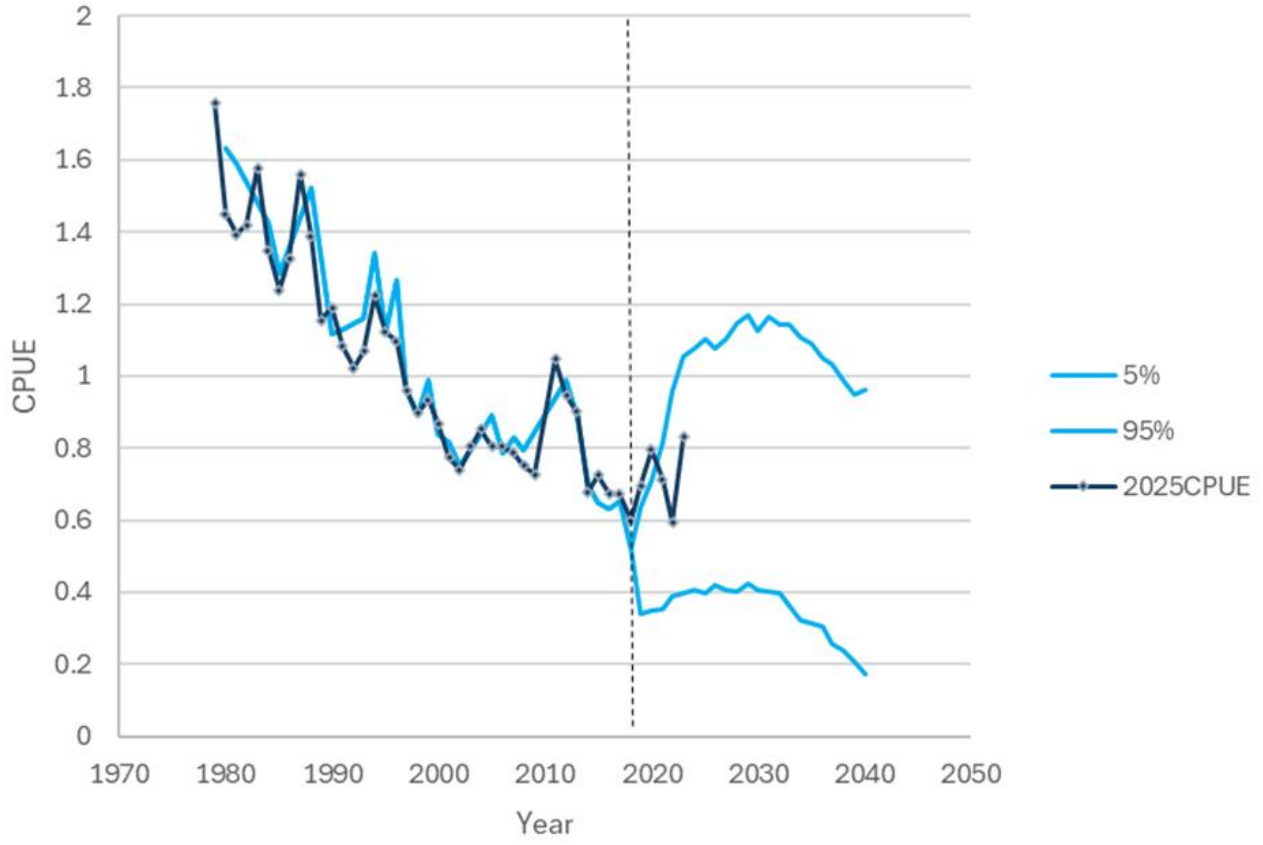
EXCEPTIONAL CIRCUMSTANCES

- Only focused on the new CPUE input data.
- The CPUE standardisation differs from the specified methods:
  - lognormal models rather than delta log-normal.
  - sub-sampling and exclusion of some data in 2021-2023.
  - Generally similar trend than 2022 and 2019 in all regions
- No other exceptional circumstances were detected in the 2024 review



Comparison of 2025 CPUE and MSE projections

- The historical period 1979-2018 shows similar trends.
- The 2025 CPUE is within the MSE range 2021-2023.
- The 2025 CPUE series is slightly above the 95% confidence bound of the MSE projected range in 2019 and 2020 -> **a positive exceptional circumstance**
- The impact may include slightly higher TAC results from the MP, which is, however, constrained by the 15% TAC change constraint component of the MP.
- Thus, no further actions are required to proceed with the recommended TAC from the BET MP.



RECOMMENDATIONS

- The **WPM(MSE) NOTED** that the application of the bigeye management procedure generated an unconstrained estimated TAC of 175,005 t which is more than 15% higher than the TAC set for 2024 and 2025. The **WPM(MSE) NOTED** that by applying the maximum 15% change in the TAC as per Resolution 22/03, the MP recommended a TAC of 92,670 t. per year for 2026-2028. Therefore, the WPM**(MSE) RECOMMENDED** the SC adopt the TAC advice for Bigeye tuna of 92,670 t resulting from the MP.
- **NOTING** that the CPUE standardisation conducted by the joint CPUE working group differs slightly from the specified methods in the MP (Williams et al., 2022), the **WPM(MSE) RECOMMENDED** that a fixed set of CPUE standardization code is developed for each MP to ensure that it is developed following the specifications of the MP.