APPENDIX 6
EXECUTIVE SUMMARY: BULLET TUNA (2026)

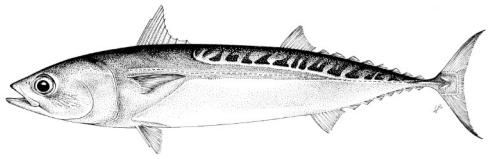


TABLE 1. Status of bullet tuna (*Auxis rochei*) in the Indian Ocean

Area[1]	Indicators		2024 stock status determination[3]
Indian Ocean	Catch 2025 (t) Mean annual catch (2021-2025) (t)	84,820[2] 63,647	**Unknown**
	MSY (1,000 t) (80% CI) F_{MSY} (80% CI) B_{MSY} (1,000 t) (80% CI) $F_{current}/F_{MSY}$ (80% CI) $B_{current}/B_{MSY}$ (80% CI) $B_{current}/B_0$ (80% CI)	Unknown	

[1]Stock boundaries defined as the IOTC area of competence;
[2]Proportion of catch fully or partially estimated for 2025: 0.7%;
[3]2022 is the final year that data were available for this assessment

Colour key	Stock overfished (SB_{year}/SB_{MSY}< 1)	Stock not overfished (SB_{year}/SB_{MSY}≥ 1)
Stock subject to overfishing (F_{year}/F_{MSY}> 1)		
Stock not subject to overfishing (F_{year}/F_{MSY}≤ 1)		
Not assessed/Uncertain /Unknown		

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Stock status. No new stock assessment was conducted in 2026 for bullet tuna and so the results are based on the results of the assessment carried out in 2024 which examined a number of data-limited methods include C-MSY, LB-SPR, and fishblicc models (based on data up to 2022). However the catch data for bullet tuna are very uncertain given the high percentage of the catches that had to be estimated due to a range of reporting issues. The size-based assessment methods LB-SPR and FishBlicc using size data from gillnet and purse seine fisheries both estimated the current spawning potential ratio to be below the reference level of SPR40% (a proxy for 40% depletion often considered as the risk averse target in many data-poor fisheries). Due to a lack of fishery data for several fisheries, only preliminary stock status indicators (CPUE and average weight) can be used. Aspects of the fisheries for bullet tuna combined with the lack of data on which to base an assessment of the stock are a cause for concern. Stock status in relation to the Commission's B_{MSY} and F_{MSY} reference points remains unknown (**Table 1**).

Outlook. Annual catches of bullet tuna have increased steadily, reaching a peak of over 40,000 t in 2020. Although catches in 2020 and 2021 remained close to 30,000 t, a sharp increase has taken place again in recent years, exceeding 90,000 t in 2023-2024 (**Fig. 1**). The increased catches are thought to be due to issues with the revision of catch data from Indonesia. There is considerable uncertainty around bullet tuna catches and insufficient information to evaluate the effect that these catch levels may have on the

resource. Research emphasis should be focused on improving the data collection and reporting systems in place and collating catch per unit effort (CPUE) time series for the main fleets, size compositions and life trait history parameters (e.g., estimates of growth, natural mortality, maturity, etc.).

Management advice. For assessed species of neritic tunas and seerfish in the Indian Ocean (longtail tuna, kawakawa and narrow-barred Spanish mackerel), the MSY was estimated during early assessments to have been reached between 2009 and 2011 and both F_{MSY} and B_{MSY} were breached thereafter. It is worth noting that the catch in 2024 was estimated to be 94,273 and there has been significant variability in estimated catches of this species in recent years. This variation is perhaps due to issue of mis-identification of this species among other reasons. In the absence of a stock assessment of bullet tuna a limit to the catches should be considered by the Commission, by ensuring that future catches do not continue to exceed the average catches estimated between 2009 and 2011 (19,580 t). This catch advice should be maintained until an assessment of bullet tuna is available. Considering that MSY-based reference points for assessed species can change over time, the stock should be closely monitored. Mechanisms need to be developed by the Commission to improve current statistics by encouraging CPCs to comply with their recording and reporting requirements, so as to better inform scientific advice.

The following should be also noted:

- The Maximum Sustainable Yield estimate for the Indian Ocean stock is unknown;
- Limit reference points: the Commission has not adopted limit reference points for any of the neritic tunas under its mandate;
- Accurate and consistent catch series data constitute a critical prerequisite for the robust execution of stock assessments. Additional efforts may be beneficial to enhance the reliability of the catch series data being submitted to IOTC;
- Further work is needed to improve the reliability of the catch series from some fisheries wherever necessary. Reported catches should be verified or estimated where needed, based on expert knowledge of the history of the various fisheries or through statistical extrapolation methods;
- Research emphasis should be focused on collating catch per unit effort (CPUE) time series for the main fleets, size compositions and life trait history parameters (e.g. estimates of growth, natural mortality, maturity, etc.).
- Species identification, data collection and reporting urgently need to be improved;
- There is limited information submitted by CPCs on total catches, catch and effort and size data for neritic tunas, despite their mandatory reporting status. In the case of 2022 catches (reference year 2021), 50.3% of the total catches was either fully or partially estimated by the IOTC Secretariat, which increases the uncertainty of the stock assessments using these data. Therefore, the management advice to the Commission includes the need for CPCs to comply with IOTC data requirements per Resolution 15/01 and 15/02.

Fisheries overview.

- **Main fisheries (mean annual catch 2021-2025)**: bullet tuna are caught using purse seine (63.5%), followed by gillnet (14.1%) and line (13.4%). The remaining catches taken with other gears contributed to 9% of the total catches in recent years (**Fig. 1**);

- **Main fleets (mean annual catch 2021-2025)**: the majority of bullet tuna catches are attributed to vessels flagged to Indonesia (63.7%) followed by India (16.9%) and Thailand (8.5%). The 19 other fleets catching bullet tuna contributed to 11% of the total catch in recent years (**Fig. 2**).

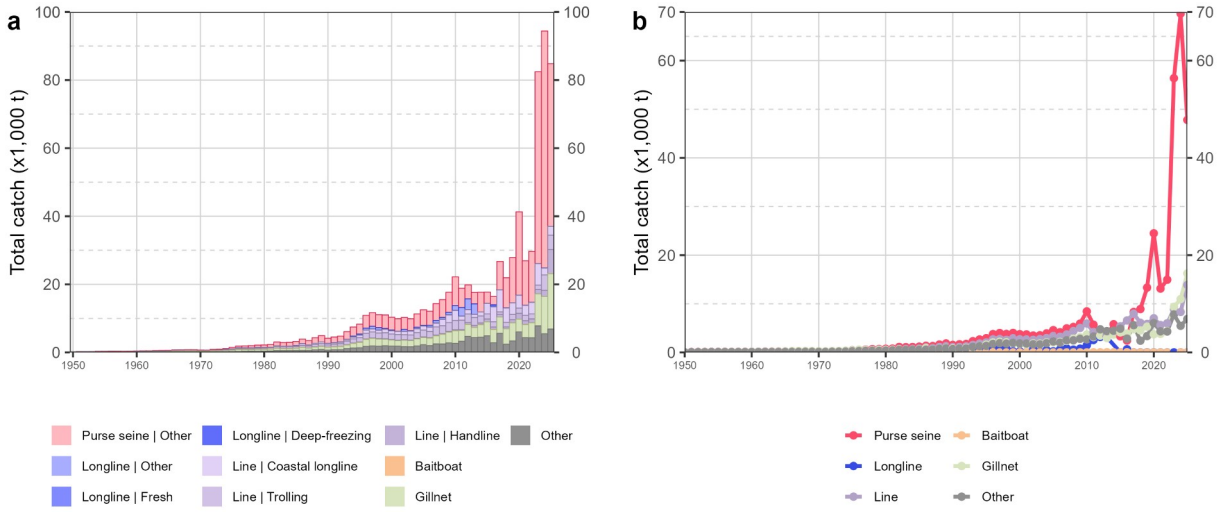


Fig. 1. Annual time series of (a) cumulative retained catches (t) by fishery and (b) individual retained catches (t) by fishery group for bullet tuna during 1950-2025. Purse seine | Other: coastal purse seine, large-scale purse seine, and ring net; Longline | Other: swordfish and sharks-targeted longlines; Other: all remaining fishing gears

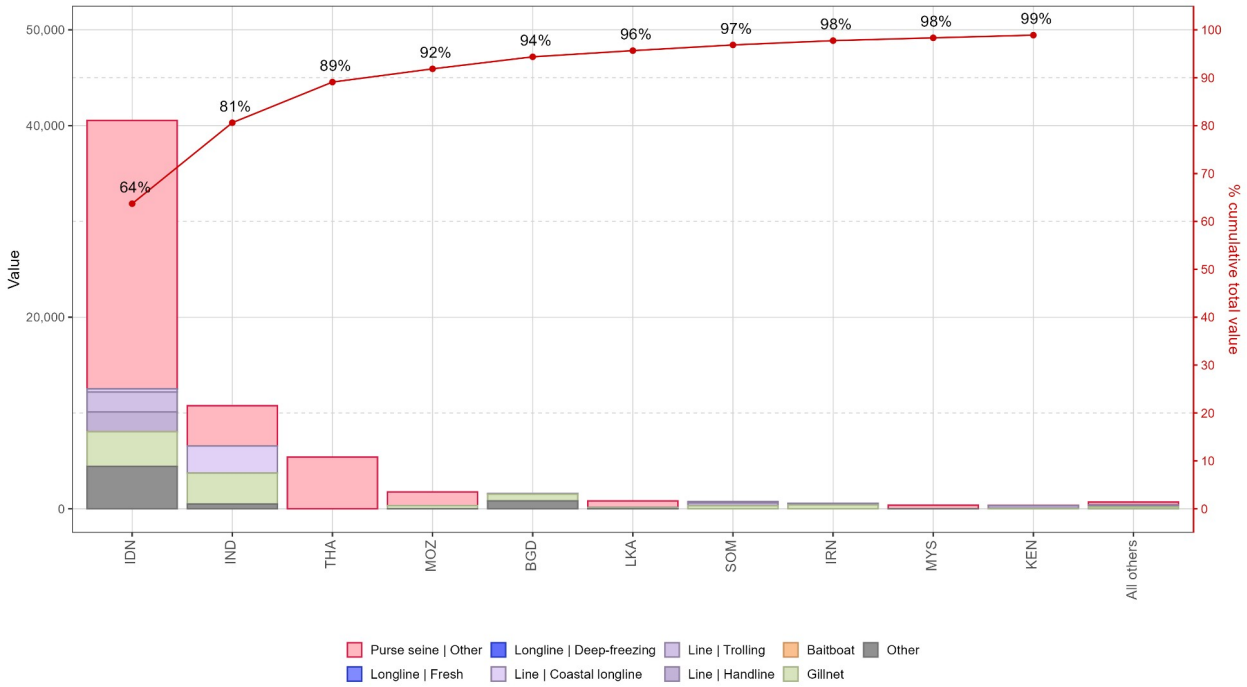


Fig. 2. Mean annual retained catches (t) of bullet tuna by fleet and fishery between 2021 and 2025, with indication of cumulative catches by fleet. Purse seine | Other: coastal purse seine, large-scale purse seine, and ring net; Longline | Other: swordfish and sharks-targeted longlines; Other: all remaining fishing gears