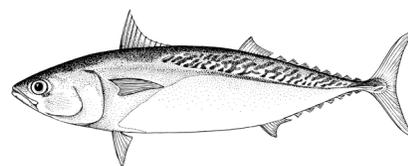


EXECUTIVE SUMMARY: FRIGATE TUNA

Status of the Indian Ocean frigate tuna (FRI: *Auxis thazard*) resourceTABLE 1. Frigate tuna: Status of frigate tuna (*Auxis thazard*) in the Indian Ocean.

Area ¹	Indicators		2016 stock status determination
Indian Ocean	Catch 2015 ² :	81,441 t	
	Average catch 2011–2015:	94,657 t	
	MSY (1,000 t) (80% CI):	unknown	
	F _{MSY} (80% CI):	unknown	
	B _{MSY} (1,000 t) (80% CI):	unknown	
	F ₂₀₁₅ /F _{MSY} (80% CI):	unknown	
B ₂₀₁₅ /B _{MSY} (80% CI):	unknown		
	B ₂₀₁₅ /B ₀ (80% CI):	unknown	

¹Boundaries for the Indian Ocean stock assessment are defined as the IOTC area of competence.

²Proportion of catch estimated or partially estimated by IOTC Secretariat in 2015: 79%

Nominal catches represent those estimated by the IOTC Secretariat. If these data are not reported by CPCs, the IOTC Secretariat estimates total catch from a range of sources including: partial catch and effort data; data in the FAO FishStat database; catches estimated by the IOTC from data collected through port sampling; data published through web pages or other means; data reported by other parties on the activity of vessels; and data collected through sampling at the landing place or at sea by scientific observers.

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		

INDIAN OCEAN STOCK – MANAGEMENT ADVICE

Stock status. No quantitative stock assessment is currently available for frigate tuna in the Indian Ocean, and due to a lack of fishery data for several gears, only preliminary stock status indicators can be used. Aspects of the fisheries for frigate tuna combined with the lack of data on which to base a more formal assessment are a cause for considerable concern. Stock status in relation to the Commission's B_{MSY} and F_{MSY} target reference points remains **uncertain** (Table 1), indicating that a precautionary approach to the management of frigate tuna should be applied.

Outlook. Total annual catches for frigate tuna have increased substantially in recent years with peak catches taken in 2010 (~100,000 t) (Fig.1). There is insufficient information to evaluate the effect that this level of catch, or a further increase in catch may have on the resource. Research emphasis on improving indicators and exploration of stock structure and stock assessment approaches for data poor fisheries should be considered a high priority for this species.

Management advice. A precautionary approach to the management of frigate tuna should be considered by the Commission, by ensuring that future catches do not exceed current catches (average 2011–2015: 94,657 t.). 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 noted:

- The Maximum Sustainable Yield estimate for the whole Indian Ocean is unknown.
- Species identification, data collection and reporting urgently need to be improved.
- Reconstruction of the catch history needs to occur before a reliable assessment can be attempted.

Limit reference points: The Commission has not adopted limit reference points for any of the neritic tunas under its mandate.

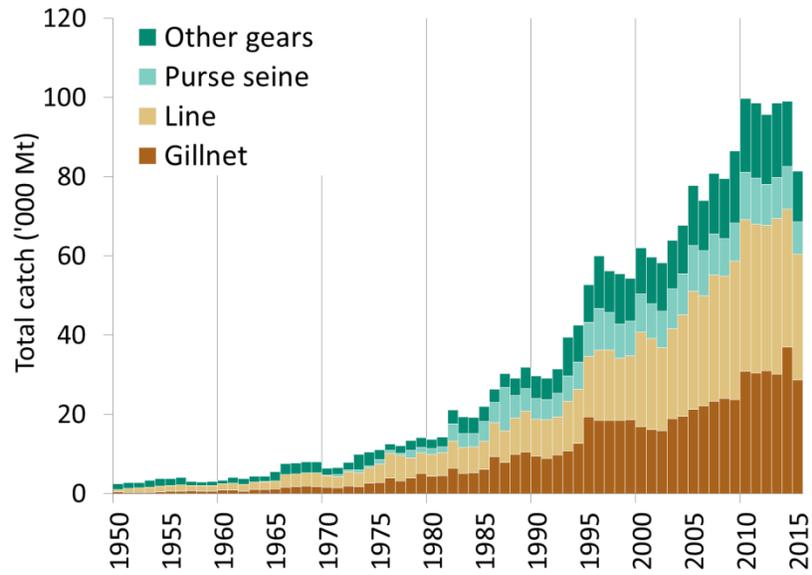


Fig. 1. Frigate tuna: Annual catches of frigate tuna by gear recorded in the IOTC Database (1950–2015) (data as of October 2016).