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**Executive Summary: Bigeye Thresher Shark**

**Status of the Indian Ocean bigeye thresher shark (BTH: *Alopias superciliosus*)**

**TABLE 1**.Bigeye thresher shark: Status bigeye thresher shark (*Alopias superciliosus*) in the Indian Ocean.

|  |  |  |  |
| --- | --- | --- | --- |
| **Area1** | **Indicators** | | **2017 stock status determination** |
| Indian Ocean | Reported catch 2016:  Not elsewhere included (nei) sharks2 2016:  Average reported catch 2012–16:  Av. not elsewhere included (nei) sharks2 2012–16: | 0 t  54,495t  93 t  49,152 t |  |
| MSY (1,000 t) (80% CI):  FMSY (80% CI):  SBMSY (1,000 t) (80% CI):  F2014/FMSY (80% CI):  SB2014/SBMSY (80% CI):  SB2014/SB0 (80% CI): | unknown |

1Boundaries for the Indian Ocean = IOTC area of competence

2Includes all other shark catches reported to the IOTC Secretariat, which may contain this species (i.e., SHK: sharks various nei; RSK: requiem sharks nei).

|  |  |  |
| --- | --- | --- |
| **Colour key** | Stock overfished(SByear/SBMSY< 1) | Stock not overfished (SByear/SBMSY≥ 1) |
| Stock subject to overfishing(Fyear/FMSY> 1) |  |  |
| Stock not subject to overfishing (Fyear/FMSY≤ 1) |  |  |
| Not assessed/Uncertain |  | |

**TABLE 2.**Bigeye thresher shark: IUCN threat status of bigeye thresher shark (*Alopias superciliosus*) in the Indian Ocean.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Common name** | **Scientific name** | **IUCN threat status3** | | |
| **Global status** | **WIO** | **EIO** |
| Bigeye thresher shark | *Alopias superciliosus* | Vulnerable | – | – |

IUCN = International Union for Conservation of Nature; WIO = Western Indian Ocean; EIO = Eastern Indian Ocean

3The process of the threat assessment from IUCN is independent from the IOTC and is presented for information purpose only

Sources: IUCN 2007, Amorim et al. 2009

**NOTE:** IOTC Resolution 12/09 *On the conservation of thresher sharks (family Alopiidae) caught in association with fisheries in the IOTC area of competence*, prohibits retention onboard, transhipping, landing, storing, selling or offering for sale any part or whole carcass of thresher sharks of all the species of the family Alopiidae[[1]](#footnote-1).

**Indian Ocean stock – Management Advice**

***Stock status.*** There remains considerable uncertainty in the stock status due to lack of information necessary for assessment or for the development of other indicators of the stock (Table 1). The ecological risk assessment (ERA) conducted for the Indian Ocean by the WPEB and SC in 2012 (Murua et al., 2012) consisted of a semi-quantitative risk assessment analysis to evaluate the resilience of shark species to the impact of a given fishery, by combining the biological productivity of the species and its susceptibility to each fishing gear type. Bigeye thresher shark received a high vulnerability ranking (No. 2) in the ERA rank for longline gear because it was characterised as one of the least productive shark species, and highly susceptible to longline gear. Despite its low productivity, bigeye thresher shark has a low vulnerability ranking to purse seine gear due to its low susceptibility to this particular gear. The current IUCN threat status of ‘Vulnerable’ applies to bigeye thresher shark globally (Table 2). There is a paucity of information available on this species and this situation is not expected to improve in the short to medium term. Bigeye thresher sharks are commonly taken by a range of fisheries in the Indian Ocean. Because of their life history characteristics – they are relatively long lived (+20 years), mature at 9–3 years, and have few offspring (2–4 pups every year), the bigeye thresher shark is vulnerable to overfishing. There has been no quantitative stock assessment and limited basic fishery indicators are available for bigeye thresher shark in the Indian Ocean. Therefore the stock status is **uncertain**.

***Outlook.*** Current longline fishing effort is directed at other species, however, bigeye thresher sharks are commonly taken as bycatch in these fisheries. Hooking mortality is apparently very high, therefore IOTC Resolution 12/09 prohibiting retaining of any part of thresher sharks onboard and promoting life release of thresher shark may be largely ineffective for species conservation. Maintaining or increasing effort can result in declines in biomass, productivity and CPUE. However there are few data to estimate CPUE trends and a reluctance of fishing fleets to report information on discards/non-retained catch. Piracy in the western Indian Ocean resulted in the displacement and subsequent concentration of a substantial portion of longline fishing effort into other areas in the southern and eastern Indian Ocean. It is therefore unlikely that catch and effort on bigeye thresher shark declined in these areas over that time period, potentially resulting in localised depletion.

***Management advice.*** The prohibition on retention of bigeye thresher shark should be maintain. Mechanisms need to be developed by the Commission to encourage CPCs to comply with their reporting requirement on sharks, so as to better inform scientific advice.

The following key points should also be noted:

* **Maximum Sustainable Yield (MSY)**: Not applicable. Retention prohibited.
* **Reference points**: Not applicable.
* **Main fishing gear** (2012–16): Gillnet-longline; longline-gillnet.
* **Main fleets** (2012–16): Sri Lanka.

**Literature Cited**

Murua H, Coelho, R., Santos, M.N., Arrizabalaga, H., Yokawa, K., Romanov, E., Zhu, J.F., Kim, Z.G., Back, P., Chavance, P., Delgado de Molina and Ruiz, J. (2012). Preliminary Ecological Risk Assessment (ERA) for shark species caught in fisheries managed by the Indian Ocean Tuna Commission (IOTC). IOTC–2012–SC15–INF10 Rev\_1

1. Scientific observers shall be allowed to collect biological samples from thresher sharks that are dead at haulback, provided that the samples are part of the research project approved by the Scientific Committee (or the Working Party on Ecosystemsand Bycatch). [↑](#footnote-ref-1)