



# International Game Fish Association

300 Gulf Stream Way, Dania Beach, Florida, 33004 U.S.A.  
Phone: (954) 927-2628 • Fax: (954) 924-4299

## Recommendations to the 30<sup>th</sup> Session of the Indian Ocean Tuna Commission

The International Game Fish Association (IGFA) was established in 1939 at the American Museum of Natural History to advance our knowledge of global fish species through recreational angling. Today, the IGFA stands as one of the most widely recognized authorities on game fish and angling-related matters in the world. Through conservation, research, rule-making to promote sustainable angling, and recognition of angling accomplishments, the IGFA represents the voice of the global recreational fishing community, including many who target the highly migratory species managed by the Indian Ocean Tuna Commission (IOTC). The social and economic contributions of these IGFA members, as well as the larger recreational fishing community who predominately practice catch and release, represent the optimum utilization of recreationally targeted species.

Billfishes are apex predators that support economically vibrant catch and release fisheries in many regions. Of the four billfish stocks (black marlin, blue marlin, striped marlin, and sailfish) managed by the IOTC, two (blue marlin and striped marlin) are both overfished and subject to overfishing while the black marlin stock is subject to overfishing. The sailfish stock appears to be not overfished nor subject to overfishing.

The IGFA continues to have great concern about how highly migratory species are being managed on a global level. The lack of data and accurate reporting on billfish catch leading to highly uncertain stock estimates is of particular concern. Additionally, the lack of management action addressing the severe depletion of some billfish stocks under the IOTC's jurisdiction is concerning for future stock health especially regarding blue marlin and striped marlin, which is facing the greatest levels of depletion among IOTC-managed species. As an organization that is committed to the conservation of game fishes, the IGFA has deployed over 700 pop-up satellite archival tags on billfish around the world in the last fifteen years through the IGFA Great Marlin Race, some of which have been in waters under this organization's purview. Discussions have taken place to provide IOTC scientists with both the tagging data as well as billfish size data from IGFA's world record database and previous research projects. The information gained from both the extensive satellite tagging efforts and IGFA World Record database will continue to be available to your scientific committee at no cost.

Lastly, we are pleased to make available the themed issue of *ICES Journal of Marine Science* based on billfish research presented at the 7<sup>th</sup> International Billfish Symposium in 2024. We strongly urge the IOTC and Scientific Committee to consider this critical research in future management and regulatory decisions.

The following are IGFA's recommendations to the 30<sup>th</sup> Session of the Indian Ocean Tuna Commission:

### **Billfish**

#### **Striped Marlin**

Based on the updated stock assessment (2024) for striped marlin, the stock is overfished and subject to overfishing, with a biomass below the level which would produce MSY for over a decade. We are very concerned about the continuously depleted condition of the striped marlin stock in the Indian Ocean and implore the IOTC to substantially reduce catches if there is any hope for rebuilding this stock. The 2024 catch (4,334 t) was substantially higher than the average for 2020-2024 (3,390 t), further increasing the probability that the current status of the stock will not improve regardless of the fact that the 2024 catch level was below MSY (4,730 t). Further, catches in 2024 were still above the suggested catch level specified in Resolution 18/05 (3,260 t), however, the limit set by Resolution 18/05 is not based on estimates of the most recent stock assessment and should be revised to incorporate limits that reflect the

2024 assessment and projections. The IGFA's recommendation is to adopt a precautionary approach to striped marlin management and significantly decrease the level of allowed catch. We also recommend implementing interim target and limit reference points as well as a decision framework for striped marlin similar to what was done for swordfish in Resolution 15/10. Although this species is mainly caught as bycatch in the gillnet and longline fisheries, the potential for a decrease in fishing mortality is possible through a shift toward releasing live fish in the longline fishery. The use of circle hooks has been proven to improve release mortality and implementation of non-offset circle hooks in surface longline fisheries along with mandatory release of live striped marlin have the potential to significantly decrease reported and cryptic fishing mortality. Given the difficulty in decreasing the TAC to sustainable levels after decades of depletion and the bycatch nature of the fisheries, the adoption of circle hooks and longline release regulations for striped marlin could help offset sustained catch levels well above those necessary to recover the stock.

### **Black Marlin**

The 2024 stock assessment for black marlin indicates that the stock is subject to overfishing but not currently overfished. The addition of improved historical catch data and model diagnostics resulted in a more reliable assessment of the black marlin stock compared to the 2021 assessment, however, we are extremely concerned with the continued overages of the catch limit (9,932 t) as stipulated in Resolution 18/05, including a reported catch of 27,266 t in 2024 and an average catch of 22,408 t from 2020-2024. Because the CPUE indicators for the stock assessment come from industrial offshore fleets, and the majority of black marlin catches are from developing coastal countries from Iran, India, and Sri Lanka, we strongly suggest the IOTC prioritize developing CPUE indices for gillnet and coastal longline fleets to better inform stock assessment models. We also recommend substantial reductions and enforcement in total allowable catch (TAC) for black marlin to the level stipulated by Resolution 18/05 (9,932 t). Reductions in fishing mortality in longline fisheries can be decreased through the implementation of mandatory circle hook use and live release.

### **Blue Marlin**

The most recent (2025) stock assessment for blue marlin indicates the stock remains overfished and subjected to overfishing. Average catch levels from 2020-2024 were 8,673 t and were above the MSY suggested level of 8,351 t, with catches in 2024 totaling 10,420 t. The stock has been in a depleted state since 2001 and a substantial decrease in catch is required to meet IOTC's objectives of recovering the stock. Based on the JABBA Kobe II Strategy Matrix, a reduction of 20% of catches (5,809 t) compared to the mean of catches from 2021-2023 (7,262 t) would recover the stock to the green quadrant by 2035 with a probability of 64%, which increases to 86% if the catches are reduced by 40% (4,357 t). Given that the current catch limit for blue marlin in Resolution 18/05 (11,930 t, which was established as the MSY value estimated in the 2016 assessment) is 30% more (3,579 t) than the new MSY estimated by the 2025 assessment (8,351 t), we strongly recommend that the IOTC urgently revise Resolution 18/05 to incorporate limits that reflect the most recent stock assessment and projections and review and strengthen the implementation and effectiveness of the measures contained in this Resolution. We also recommend the IOTC implement a precautionary approach by decreasing the TAC to a maximum of 5,700 t to attempt to meet Commission objectives listed above. Similar to striped and black marlin, blue marlin fishing mortality could be decreased in longline fisheries through implementation of non-offset circle hooks and release of live fish.

### **Sailfish**

Although the most recent (2025) stock assessment for sailfish concludes that fishing mortality and biomass are near healthy levels (not overfished nor subject to overfishing), the IGFA believes this outcome should be further examined as it may represent an overly optimistic view of the current stock status and mortality level. The high catches reported from 2020 to 2024 (average of 36,390 t) are very concerning and the IGFA recommends significant efforts be made to address the uncertainty of the

assessment results, especially the potential for the violation of the three equilibrium assumptions associated with the assessment methods employed to overcome the lack of abundance data for Indo-Pacific sailfish. We urge the IOTC to evaluate the potential bias this index of abundance may have introduced into the assessment results (i.e., producing trends that are diametrically opposed to true population trends) by conducting a simulation study to inform whether the index of abundance is acceptable for use in the stock assessment. Overall, we recommend substantial reductions in fishing mortality for Indo-Pacific sailfish, given the consistent exceedance of prior and current MSY estimates, as well as consistent overages of catch limits established in Resolution 18/05. Lastly, we recommend the IOTC update the catch limits as stipulated in Resolution 18/05 since they have been exceeded since 2020 and are not based on estimates of the most recent stock assessments and urge the development of potential CPUE indicators from coastal gillnet and longline fisheries, as well as assessment approaches for data poor fisheries.

## **Tunas and Mackerels**

### **Yellowfin Tuna**

The most recent assessment (2024) reported that the yellowfin tuna stock is not overfished and not subject to overfishing. The revisions addressed many of the recommendations from the independent review of the stock assessment carried out in 2023 and we commend the IOTC for pursuing improvements for both the stock assessment and stock status of yellowfin tuna. The new abundance index (derived from the joint CPUE estimates for longline fleets) suggested an increase in abundance for yellowfin in the last three years (2021-2023), including considerable increases in spawning biomass after 2021 following recent strong recruitment, which may lead to a continued increase in projected biomass in the forthcoming years. We urge the IOTC to ensure yellowfin catches remain within the estimated recent (20-year average) MSY (402,000-427,000 t) and in the face of recent high recruitment, not increase catch limits to allow the stock to rebuild and maintain high recruitment trends.

### **Bigeye Tuna**

Although the updated (2025) stock assessment for Indian Ocean bigeye tuna determined that the stock is still overfished, it is not currently subject to overfishing and the biomass has nearly recovered to the target SBMSY level. These are encouraging results, however, we urge the IOTC to continue to implement the bigeye management procedure and ensure catches remain below the TAC (80,583 t for 2024-2025), which was exceeded in 2024 (87,040). Since 2021, catches have exceeded the TAC for 2024-2025, and a TAC of 92,670 t has been adopted for 2026-2028. We are concerned about the continued overage of the TAC and strongly recommend the IOTC work to properly implement the management procedure advice.

### **Kawakawa**

The status of kawakawa remains highly uncertain and the 2023 assessment highlights the need for more and better information as catches continue to increase. The assessment categorizes kawakawa as overfished but not experiencing overfishing while the information used to make that categorization is highly uncertain and possibly biased based on assumptions and estimations. With current estimated catch in 2024 (160,272 t) greater than MSY levels (154,000 t), now is the time to limit increasing catch of kawakawa before the situation worsens. The IGFA recommends taking the precautionary approach and limit catch to the lower end of the MSY range at 122,000 t. Additionally, there is a clear need for improvement in the data collection and reporting process for this species, including the need for CPCs to comply with IOTC data requirements per Resolutions 15/01 and 15/02, to allow for more traditional assessment methods that would represent a significant improvement over the data poor methods implemented in the 2023 assessment.

### **Longtail Tuna**

Based on the 2023 assessment, longtail tuna is both overfished and subject to overfishing with the 2024 catch level (148,681 t) in excess of estimated MSY (133,000 t) and an increasing trend in exploitation rates. Regardless of the high uncertainty in catch implemented in the assessment methodology, this stock is highly vulnerable to exploitation compared to other tuna and mackerel species due to their fidelity to specific locales. Additionally, the implementation of data-poor techniques such as Optimized Catch-Only Methods is not preferable and the IGFA recommends the IOTC improve data collection to ensure more appropriate assessment methodologies can be employed in the future. The IGFA also recommends maintaining catch levels below MSY estimates, preferably on the lower end of the MSY range closer to 108,000 t, in the absence of limit reference points for neritic tunas.

### **Narrow-Barred Spanish Mackerel**

The 2023 assessment highlights the concerning trend in catch for narrow-barred Spanish mackerel with a 2024 catch level of 157,754 t, significantly higher than the 5-year average of 138,169 t. The stock is both overfished and subject to overfishing and although much uncertainty exists in the assessment, there is a clear need to reduce catch and improve data collection for this species. Given the high uncertainty in the assessment, effort should be made to address data gaps to allow for more traditional integrated assessment techniques. The IGFA recommends decreasing catch to below estimated MSY levels, ensuring current MSY estimates are accurate, and addressing the continued increased in narrow-barred Spanish mackerel catches seen over the last decade.

### **Sharks**

#### **Shortfin Mako Shark**

The 2024 stock assessment for shortfin mako sharks indicates that the stock is overfished and subject to overfishing. Catches in the terminal year of the assessment (2022) were higher than MSY (1,930 t) and if high catch rates continue, the biomass will continue to decline, and fishing mortality will continue to increase over time. We support the annual recommended TAC of 1,217.2 t, across all fishing mortality, to recover the stock to the green quadrant of the Kobe plot with at least 50% probability in 10 years. Given the species' vulnerability to longline and purse seine gear, we also suggest the IOTC strengthen reporting measures for discarded or non-retained sharks to better estimate catches.

*The International Game Fish Association is a nonprofit organization committed to the conservation of game fish and the promotion of responsible, ethical angling practices through science, education, rule making, record keeping and recognition of outstanding accomplishments in the field of angling.*

Email: [HQ@igfa.org](mailto:HQ@igfa.org) • Website: [www.igfa.org](http://www.igfa.org)