



International Game Fish Association

300 Gulf Stream Way, Dania Beach, Florida, 33004 U.S.A.

Phone: (954) 927-2628 • Fax: (954) 924-4299

The International Game Fish Association (IGFA) is a non-profit organization that represents recreational anglers throughout the world. IGFA was established in 1939, has active members in over 100 countries and provides rules for ethical angling practices. Many of IGFA's members target the highly migratory species managed by IOTC, especially marlin, sailfish and spearfish (i.e., billfish) which are primarily caught and released, as well as other tuna and mackerel 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 sailfish stock appears to be subject to overfishing but not overfished. Black marlin assessments remain too uncertain to determine stock status definitively.

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 is concerning for future stock health especially in regard to striped and blue marlin. As an organization that is committed to the conservation of game fishes, IGFA has deployed over 500 pop-up satellite archival tags in billfish around the world in the last eleven years, some of which have been in waters under this organization's purview. The IGFA has also sponsored research analyzing the distribution of sailfish by size using IOTC provided data that could be published through the Commission if desired. The information gained from both the extensive satellite tagging efforts and sailfish size analysis are available to your scientific committee at no cost.

The following are IGFA's recommendations for the 26th Session of the Indian Ocean Tuna Commission:

Billfish

Striped Marlin

The extremely depleted state of this stock based on the outputs from both the JABBA and SS3 models in the 2021 assessment indicates that catch must be substantially decreased in an effort to rebuild striped marlin in the region. For the sixth assessment in a row, the stock has been indicated to be overfished and subject to overfishing, and even though 2020's catch was lower than the 5-year average, there remains a very high probability that this level will continue the decline in stock health. IGFA's recommendation is to adopt a precautionary approach to striped marlin management and significantly decrease the level of allowed catch. Based on the outputs from the 2021 JABBA run, a TAC of 1,501t has a 73% chance to return striped marlin to the green quadrant of the Kobe plot by 2026 and an 89% chance by 2027. At the 1,501t TAC level, the striped marlin stock would have a 98% chance of being in the green quadrant by 2029 assuming JABBA projections and assessment estimations are accurate. This level of catch should be the maximum considered if the striped marlin stock is to return to a healthy level given the remaining uncertainty in current estimates and the depleted state of the stock. Knowing the high level of uncertainty in catch reporting, the precautionary approach should be mandatory.

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 movement to 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 the surface longline fisheries along with mandatory release of live striped marlin has the potential to significantly decrease total 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 per Resolution 18/05.

Blue Marlin

Similar to striped marlin, the blue marlin stock in the IOTC's purview is experiencing overfishing and is overfished. Although catch levels from 2020 (6,958t) were lower than the 5-year average from 2016-2020 (8,701t) and this number is below the estimate of MSY at 9,984t, this average of catch would not give blue marlin the 60% chance to move to the green quadrant of the Kobe plot by 2027 indicated by the Commission's objectives. To achieve the 60% probability of moving to the green quadrant, a further reduction to 7,800t of catch is needed based on the JABBA results from the 2017 stock assessment. IGFA's recommendation is, once again, to take a precautionary approach and reduce allowed catch to a maximum to 7,800t to achieve management objectives by 2027.

Similar to striped marlin, blue marlin fishing mortality could be decreased in longline fisheries through implementation of non-offset circle hooks and release of live fish. This could be especially important given the increasing trend in F/F_{MSY} over the last four decades.

Black Marlin

The lack of predictive capability identified by the assessment diagnostics is of major concern. Although the 2021 assessment indicated the potential that the stock is not overfished or subject to overfishing, the 2020 catch level of 16,977t and 5-year average catch of 18,289t is substantially higher than the MSY limit indicated in Resolution 18/05 of 9,932t. The IGFA recommends the collection of data to estimate CPUE indices from coastal longline fleets and gillnets to better inform assessment models along with a substantial reduction in TAC to the level stipulated by Resolution 18/05 of 9,932t.

Sailfish

The lack of stock status determination and the need to implement data poor and stock reduction analysis techniques for sailfish is concerning given the increase in catches in recent years. The lack of certainty in estimating catch for sailfish needs to be addressed in an effort to better understand the health of the sailfish stock in the Indian Ocean. Resolution 18/05 indicated a catch limit of 25,000t which was exceeded both in 2020 (26,890t) as well as in the 5-year average (29,897t). With an estimate of MSY for the whole Indian Ocean stock of 23,900t, the significant increase in catch over the last decade must be addressed. The IGFA recommends improved data collection from gillnet fisheries and the development of CPUE indices where lacking as well as a maximum catch limit of 23,900t to match the MSY estimate for the Indian Ocean sailfish stock.

Tunas and Mackerels

Bigeye Tuna

The most recent assessment of bigeye shows the stock is not overfished but subject to overfishing, the likelihood that catch levels will exceed MSY in future years without intervention is concerning. The IGFA recommends the IOTC sets appropriate permanent reference points for bigeye and ensure bigeye stock biomass is above the lower median MSY level indicated in the recent assessment. A total catch reduction 10% below 2018 catch levels (73,272t) is recommended as a maximum to maintain biomass levels above MSY with reasonable probability.

Yellowfin Tuna

With the high levels of uncertainty in the increasing levels of catch, low productivity estimates, and regional biomass trend inconsistencies, there is a clear need address yellowfin stock management given the overfished and subject to overfishing designations. The IGFA recommends the IOTC adopt new management measures, including permanent reference points, to limit catch to 60% of 2020 levels as none of the previously agreed upon measures have been successful at improving the sustainability of the yellowfin stock. The IGFA also recommends improvement to data collection protocol standardization and ensuring continued increases in data reporting to provide the best estimate of yellowfin catch for the assessment process. The precautionary approach to yellowfin management has become more critical as this stock continues to decline.

Longtail Tuna

The longtail tuna is both overfished and subject to overfishing with the 2020 catch level, as well as the 5-year average, in excess of estimated MSY levels. 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 Optimised 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 in the absence of limit reference points for neritic tunas.

Narrow-Barred Spanish Mackerel

The high levels of catch in the 5-year average reveals an unsustainable trend for the narrow-barred Spanish mackerel stock. 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. The implementation of data poor methods in the assessment is less than ideal and 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.

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 • Website: www.igfa.org