

**RECOMMENDATION BY ICCAT TO ESTABLISH
REBUILDING PROGRAMS FOR BLUE MARLIN AND WHITE MARLIN/ROUNDSALE SPEARFISH**

RECALLING the 2000 blue marlin stock assessment, which found that the stock was below B_{MSY} (overfished) with fishing mortality above F_{MSY} (overfishing occurring), and subsequent assessments, most recently in 2018, confirming that the stock remains in this state;

ACKNOWLEDGING the 2019 white marlin/roundscale spearfish stock assessment, which found that overfishing is not occurring, but the stock remains overfished after more than twenty years of management by ICCAT;

AWARE OF measures adopted by the Commission over the last 20 years to improve the status of blue marlins and white marlins, including the *Recommendation by ICCAT to establish a Plan to Rebuild Blue Marlin and White Marlin Populations* (Rec. 00-13), *Recommendation by ICCAT to Further Strengthen the Plan to Rebuild Blue Marlin and White Marlin stocks* (Rec. 12-04), and subsequent recommendations;

UNDERSTANDING, however, the 2019 SCRS advice that total catches of blue marlin should be reduced to 1,750 t or less to provide at least a 50% chance of rebuilding by 2028 and that total catches of white marlin/roundscale spearfish should not exceed 400 t to support rebuilding;

ACKNOWLEDGING that dead discards are not accounted for in the annual limits in the *Recommendation by ICCAT to Replace Rec. 15-05 to Further Strengthen the Plan to Rebuild Blue Marlin and White Marlin Stocks* (Rec. 18-04);

AIMING to establish limits for blue marlin and white marlin/roundscale spearfish that take into account reported dead discards;

UNDERSCORING the existing obligations of CPCs to require the collection of data on dead and live discards in their domestic observer and logbook programs under the *Recommendation by ICCAT on Information Collection and Harmonization of Data on By-catch and Discards in ICCAT Fisheries* (Rec. 11-10), consistent with the *Recommendation by ICCAT to Establish Minimum Standards for Fishing Vessel Scientific Observer Programs* (Rec. 16-14), and to report these data to ICCAT;

THE INTERNATIONAL COMMISSION FOR THE
CONSERVATION OF ATLANTIC TUNAS (ICCAT) RECOMMENDS THAT:

1. CPCs shall implement measures to end overfishing of blue marlin as soon as possible and to rebuild blue marlin and white marlin/roundscale spearfish stocks to their respective B_{MSY} levels as follows:

Annual limits and related provisions

2. An annual limit of 1,670 t for blue marlin and of 355 t for white marlin/roundscale spearfish is established beginning in 2020. Landings limits shall be implemented as follows:

<i>Blue Marlin</i>	<i>Landings Limit (t)</i>
Brazil	159.8
China, P.R.	37.9
Chinese Taipei	126.2
Côte d'Ivoire	126.2
European Union ¹	403.8
Ghana	210.3
Japan	328.1
Korea Rep.	29.4
Mexico	58.9
S. Tomé & Príncipe	37.9
Senegal	50.5
Trinidad and Tobago	16.8
Venezuela	84.1
TOTAL	1,670

¹ The following transfer of annual landings limit shall be authorized for blue marlin: From EU to Trinidad & Tobago: 2 t.

<i>White Marlin/Roundscale Spearfish</i>	<i>Landings Limit (t)</i>
Barbados	10
Brazil	50
Canada	10
China, P.R.	10
Chinese Taipei	50
European Union	50
Côte d'Ivoire	10
Japan	35
Korea Rep.	20
Mexico	25
S. Tomé & Príncipe	20
Trinidad and Tobago	15
Venezuela	50
TOTAL	355

The United States shall limit its landings to 250 recreationally caught Atlantic blue marlin and white marlin/roundscale spearfish combined on an annual basis. All other CPCs shall limit their landings to a maximum of 10 t of Atlantic blue marlin and 2 t of white marlin/roundscale spearfish combined.

3. a) Any excess of the annual landings limits established in paragraph 2 shall be deducted from the respective landings limits during or before the adjustment year, in the following way:

<i>Catch Year</i>	<i>Adjustment Year</i>
2019	2021
2020	2022
2021	2023
2022	2024
2023	2025
2024	2026

- b) Notwithstanding subparagraph (a) above, if any CPC exceeds its landings limit during any two consecutive years, its landings limit shall be reduced on or before the adjustment year by at least 125% of the excess harvest, and the Commission may recommend additional actions, as appropriate.
- c) Starting with 2020 catches, any underharvest by a CPC of its annual landings limit may not be carried forward to a subsequent year.

Live release requirement and retention allowances

4. To the extent possible, CPCs shall require pelagic longline vessels and purse seine vessels flying their flag to promptly release blue marlin and white marlin/roundscale spearfish that are alive at haul-back, giving due consideration to the safety of crew members, in a manner that causes the least harm and maximizes post-release survival.
5. CPCs shall encourage the implementation of the minimum standards for safe handling and live release procedures, as specified in **Annex 1** while giving due consideration to the safety of the crew. The fishing vessels should have readily available on deck and easily accessible by crew, a lifting device, bolt cutter, dehooker/disgorger and line-cutter for safe release of live marlins caught.
6. CPCs should ensure that captain and crew members of their fishing vessels are adequately trained, aware of and use proper mitigation, identification, handling and releasing techniques and keep on board all equipment necessary for the release of marlins in accordance with the minimum standards for safe handling procedures as specified in **Annex 1**. Nothing in this measure shall prevent CPCs from adopting more stringent measures.
7. CPCs shall endeavor to minimize the post-release mortality of marlins/roundscale spearfish in their ICCAT fisheries.
8. CPCs may authorize their pelagic longline and purse seine vessels to catch and retain on board, transship, or land blue marlin and white marlin/roundscale spearfish that are dead, within their landing limit.
9. For CPCs that prohibit dead discards, the landings of blue marlin and white marlin/roundscale spearfish that are dead when brought alongside the vessel and that are not sold or entered into commerce shall not count against the limits established in paragraph 2, on the condition that such prohibition be clearly explained in their Annual Report. This provision shall be applicable only to commercial fisheries.
10. Blue marlin and white marlin/roundscale spearfish that are caught for local consumption by developing coastal CPCs, or by other CPCs' small island, artisanal, subsistence, and small-scale coastal fisheries are exempted from Paragraph 4 provided these CPCs (a) submit Task I and Task II data according to the reporting procedures established by the SCRS and (b) in the case of non-developing coastal CPCs, notify the Commission of their claim to this exemption and measures taken to limit application of this exemption to such fisheries.
11. For recreational and sport fisheries:
 - a) CPCs shall take appropriate measures to ensure that any released fish are released in a manner that causes the least harm.
 - b) CPCs shall establish minimum sizes for retention that meet or exceed the following lengths: 251 cm Lower Jaw-Fork Length (LJFL) for blue marlin and 168 cm LJFL for white marlin/roundscale spearfish.
 - c) CPCs shall prohibit the sale, or offering for sale, of any part or whole carcass of blue marlin or white marlin/roundscale spearfish caught in recreational and sport fisheries.

Observer programme

12. CPCs shall collect catch data on blue marlin and white marlin/roundscale spearfish, including live and dead discards, through logbooks and scientific observer programs as required by Rec. 11-10 and Rec. 16-14. CPCs shall include their estimates of total dead and live discards in their Task I Nominal Catch data submission.

13. CPCs shall establish or maintain data collection programs in recreational and sport fisheries, including a minimum of 5% scientific observer coverage of blue marlin and white marlin/roundscale spearfish tournaments, to ensure that catches are reported in accordance with existing ICCAT reporting obligations.

Data collection and reporting

14. CPCs shall provide their estimates of total live and dead discards of blue marlin, white marlin/roundscale spearfish, based on fishing logbooks, landing declarations, or equivalent document for the sport/recreational fisheries, as well as scientific observer reports, as part of their Task I and II data submission to support the stock assessment process.
15. Starting with the reporting of 2020 catches, failure to report Task I data, including dead discards, for blue marlin and white marlin/roundscale spearfish in accordance with established ICCAT requirements will result in a prohibition of retention of these species in accordance with the *Recommendation by ICCAT on Penalties Applicable in Case of Non Fulfilment of Reporting Obligations* (Rec. 11-15).
16. No later than 2020, CPCs shall present to the SCRS the statistical methodology used to estimate dead and live discards. CPCs with artisanal and small-scale fisheries shall also provide information about their data collection programs.

The SCRS shall review these methodologies and if it determines that a methodology is not scientifically sound, the SCRS shall provide relevant feedback to the CPCs in question to improve the methodologies.

The SCRS shall also determine if one or more capacity building workshops are warranted to help CPCs to comply with the requirement to report total live and dead discards. If so, the Secretariat in coordination with the SCRS should begin organizing the SCRS-recommended workshop(s) in 2021 with a view to convening them as soon as practicable.

17. The SCRS shall evaluate the completeness of Task I and II data submissions, including estimates of total dead and live discards, and determine the feasibility of estimating fishing mortalities by industrial fisheries (including longline and purse seine), artisanal fisheries and recreational fisheries. If after conducting such evaluation, the SCRS determines that significant gaps in data reporting exist, the SCRS should explore approaches to estimate the level of unreported catches to include in future stock assessments in order to enhance the basis on which to provide management advice to the Commission.

SCRS work and request for scientific advice

18. The SCRS shall continue its work to further improve data collection initiatives as part of the ICCAT Enhanced Program for Billfish Research to overcome the data gap issues of those fisheries, in particular artisanal fisheries of developing CPCs to inform future decisions by the Commission.
19. The Secretariat, with support from the Commission and the SCRS, shall continue its review of the relevant work conducted by the regional and sub-regional international organizations, similar to the review conducted for West Africa, with a priority focus on the Caribbean and Latin America. The Secretariat and CPCs are also encouraged to collaborate with the Western Central Atlantic Fisheries Commission (WECAFC) on fishery statistics on ICCAT species.

Taking into account the findings of these regional reviews, the CPCs shall take action, as appropriate, to improve data collection and reporting programs in accordance with any SCRS advice in preparation for the next white marlin/roundscale spearfish and blue marlin stock assessments.

20. The Permanent Working Group for the Improvement of ICCAT Statistics and Conservation Measures (PWG), in cooperation with the SCRS, shall work to develop recommendations on the following issues for consideration at the 2021 annual meeting of the Commission:
 - a) Minimum standard for an electronic monitoring system such as:

- (i) the minimum specification of the recording equipment (e.g. resolution, recording time capacity, data storage type, data protection)
- (ii) the number of cameras to be installed at which points on board
- b) What shall be recorded
- c) Data analysis standards, e.g., converting video footage into actionable data by the use of artificial intelligence
- d) Data to be analyzed, e.g., species, length, estimated weight, fishing operation details
- e) Reporting format to the Secretariat

In 2020 CPCs are encouraged to conduct trials on electronic monitoring and report the results back to the PWG and the SCRS in 2021 for their review.

21. The SCRS shall, in collaboration with CPCs, explore potential technical changes to the terminal gear (such as hook shape, hook size, leader type, etc.) and fishing practices (e.g., timing, soaking time, bait, depths, areas) that could reduce bycatch and bycatch mortality (at-vessel and post-release). As part of this process, the SCRS in collaboration with CPCs shall design and implement a study(ies) to compare the effects of hook shape and size on catch rates (considering both hooking and retention rates), at-haulback mortality, and post-release mortality of sharks. The experimental design should account for the influence of leader material types and consider potential operational differences among regions and fleets.
22. The SCRS shall conduct assessments for blue marlin in 2024 and white marlin/roundscale spearfish in 2025.

Compliance

23. Consistent with the *Recommendation by ICCAT on Improvement of Compliance Review of Conservation and Management Measures Regarding Billfish Caught in the ICCAT Convention Area* (Rec. 18-05), CPCs shall submit details of their implementation of this measure through domestic law or regulations, including monitoring, control and surveillance measures, and of their compliance with this measure using the billfish check sheet.

Repeals and review clause

24. In 2022, the Commission shall review any new scientific advice from the SCRS and consider adjustments, such as the adoption of additional conservation and management measures or review of the landing limits, as appropriate.
25. This Recommendation repeals and replaces the *Recommendation by ICCAT to Replace Rec. 15-05 to Further Strengthen the Plan to Rebuild Blue Marlin and White Marlin Stocks* (Rec. 18-04).

Minimum standards for safe handling and live release procedures²

The following steps should be followed to reduce stress and injury to incidentally caught marlins and round scale spearfish specimens for a maximum probability of survival while minimizing the safety risk to the crew. Skippers and crew should always put their personal safety first when releasing marlins and other large fish. Wear gloves and avoid working around the spear-shaped bill. These basic guidelines do not replace stricter safety rules established by CPCs national Authorities.

- Stop the vessel or substantially reduce its speed.
- Secure the far side of the longline mainline to the boat to avoid that any remaining gear in the water pulls on the line and the animal.
- Bring the marlin as close to the vessel as possible without putting too much tension on the branchline to avoid that a released hook or branchline breaks could shoot hook, weights and other parts toward the vessels at high speed.
- Do not remove the alive marlin from the water boatside, while safely removing the hook.
- Limit the number of manipulation.
- Do not gaff the fish in the body.
- If possible, avoid grabbing the marlin by the body and use gloves to grab the marlin by its snout or a snooter.
- In case the hook is visible, lightly flicking the branchline to try dislodging the hook.
- Where feasible rig a measuring device so the fish can be roughly measured in the water (e.g. mark a pole, leader and float; mark the gunwale of the boat with measurements marks).
- If the marlin is vigorously twisting and spinning making it too dangerous to use a dehooker/disgorger or the marlin swallowed the hook that cannot be seen, then use a long-handled line cutter and cut the leader/line as close to the fish as safely possible so that they are not trailing large amounts of line that could reduce post-release survival.
- Help revive the fish by slowly towing it in the water until its colour or energy returns (5 minutes or more). Most highly migratory species must keep water flowing over their gills to breathe. With the boat in gear, slowly move forward while keeping the fish's head in the water.
- If hooked, and hook is visible in the body or mouth, use a bolt cutter to remove the hook barb, and then remove the hook.
- Don't wrap your fingers, hands or arms in the line when bringing a marlin to the boat – you might get pulled overboard.
- Don't lift them using the branchline, especially if hooked.
- Do not lift using thin wires or cables or by the tail alone.

² <https://www.bmis-bycatch.org/index.php/mitigation-techniques/safe-handling-release>

- Poisson F., Wendling B., Cornella D., Segorb C., 2016. Guide du pêcheur responsable : Bonnes pratiques pour réduire la mortalité des espèces sensibles capturées accidentellement par les palangriers pélagiques français en Méditerranée. Projets SELPAL et RéPAST. 60 pages.
- Poisson F., Vernet A. L., Séret B., Dagorn L. Good practices to reduce the mortality of sharks and rays caught incidentally by the tropical tuna purse seiners. EU FP7 project #210496 MADE, Deliverable 7.2., 30p.
- AFMA (2016) Shark and Ray Handling Practices - A guide for commercial fishers in southern Australia
- NOAA fisheries, 2017, Careful Catch and Release Brochure. 2 pages.