

2021 REPORT OF THE INTERSESSIONAL MEETING OF PANEL 4
(Virtual Zoom meeting, 6-8 July 2021)

1. Opening of the Meeting

Mr. Raul Delgado opened the meeting with a moment of silence to commemorate the recent loss of Dr Fábio Hazin. The Secretariat explained the logistical aspects of the virtual intersessional and the timeline for the meeting. Brazil took the floor to express their thanks for the condolences from other CPCs regarding the loss of Dr Hazin and presented a Statement of Grief and Condolences (**Appendix 9**). Brazil expressed its intention to maintain the chairmanship of Panel 4 in accordance with the rules of ICCAT, but said they have not yet identified a person to serve as Chair. In the interim, the Chairman of ICCAT agreed to serve as the interim Chair for this meeting.

2. Appointment of Rapporteur

The Panel appointed Dr Bryan Keller (United States) as Rapporteur.

3. Adoption of Agenda and meeting arrangements

The Agenda was adopted (**Appendix 1**).

The Executive Secretary introduced the 21 Contracting Parties present at the meeting: Algeria, Brazil, Canada, China P.R., European Union, Gabon, Japan, Korea, Liberia, Morocco, Mexico, Nigeria, Norway, Panama, Senegal, Trinidad & Tobago, Tunisia, Turkey, United Kingdom, United States and Uruguay.

The Executive Secretary also introduced one of ICCAT's Cooperating Non-Contracting Parties, Entities or Fishing Entities present at the meeting, Chinese Taipei. Finally, the Executive Secretary introduced ten Non-Governmental Organisations attending as observers: Defenders of Wildlife, EAC (Ecology Action Centre), GTA (Global Tuna Alliance), PEW Charitable Trusts, Pro Wildlife, SCIAENA (Associação de Ciências Marinhas e Cooperação), Sharkproject International, The Ocean Foundation, The Shark Trust and WWF (World Wide Fund for Nature).

The List of Participants is contained in **Appendix 2**.

4. Review of current information on the state of the North Atlantic Shortfin Mako stock and 2019/2020 catch levels

The Chair introduced and the Panel took note of the document Shortfin Mako Catches Available in Task 1: North Atlantic Stock (**Appendix 3**), which included recent catch data provided by some CPCs.

5. Consideration of possible measures to achieve conservation of North Atlantic shortfin mako

Statements were made to Panel 4 by the following Contracting Parties: Canada, EU, and the United States. Statements were also made by Non-Governmental Organisations attending as observers: EAC, Pro Wildlife, SCIAENA, Sharkproject International and International Pole & Line Foundation, WWF and Shark Trust (**Appendices 10-19**).

The Chair brought the Panel's attention to three proposals submitted by CPCs before the intersessional meeting, "Draft recommendation by ICCAT to establish a rebuilding program for North Atlantic shortfin mako sharks caught in association with ICCAT fisheries" (**Appendix 4**) (sponsored by the United States), "Draft recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries" (**Appendix 5**) (sponsored by EU), and "Draft recommendation by ICCAT on conservation of Atlantic shortfin mako caught in association with ICCAT fisheries" (**Appendix 6**) (sponsored by Canada, Gabon, Sierra Leone, the United Kingdom, Senegal, Chinese Taipei, Guinea-Bissau,

and The Gambia). The Chair invited the CPCs to present their proposals in order to share baseline perspectives on the conservation and management of North Atlantic shortfin mako and to spark broader discussion by all CPCs when the Panel turned to the discussion of the Chair's proposal.

Draft recommendation by ICCAT to establish a rebuilding program for North Atlantic shortfin mako sharks caught in association with ICCAT fisheries (Appendix 4)

The United States presented its proposal and noted its own progress in reducing the landings of North Atlantic shortfin mako by over 85% since first learning about the stock being overfished in 2017 by implementing the measures in the proposal. The main components of the proposal include establishing a rebuilding program that takes into account all sources of mortality, requiring gear modifications to reduce at-haulback and post-release mortality, requiring that sharks be landed with their fins naturally attached, and prohibiting transshipping. The proposal also bans retention of North Atlantic shortfin mako except under very stringent conditions. The United States stressed that, taken together, the provisions in the U.S. proposal would achieve mortality reductions beyond a simple ban on retention.

Several CPCs raised questions about how the provision to reduce mortality by 85% would be enforced; the proposal's sponsor noted that it would be the responsibility of each individual CPC to track its mortality reductions and report progress in implementing the measures to ICCAT. One CPC inquired as to why the 2013-2015 baseline was used to calculate catch reductions, with the United States responding these were the most recent years of data that were used in 2017 stock assessment. A CPC noted concern that, under the U.S. proposal, live shortfin mako would be permitted to be harvested. The United States explained that this provision would only be applicable after CPCs reduce mortality by 85% and that the higher minimum size requirements ensure only a very small number of mature individuals could be harvested. The United States cited that in the last year, for example, no female shortfin mako would have been harvested due to these strict requirements. One CPC asked if the proposed measure would apply to sport and recreational fisheries that target sharks. The United States responded that the scope of the 2021 proposal is consistent with Rec. 19-06, which has been applied to all aspects of the U.S. sport and recreational fishery, including the few tournaments that target mako sharks.

Some CPCs were concerned with the gear modifications detailed in the U.S. proposal, specifically the use of circle hooks and monofilament leaders. A CPC noted that hooking rates are higher with circle hooks and this could have negative implications for shortfin mako. The SCRS Vice Chair explained that in the recent Sub-Committee on Ecosystems and By-catch (SC-ECO) meeting, new research was presented that corrected for a confounding variable in two meta-analyses which provided the main evidence that retention was higher on circle hooks. The new paper concluded that there is no statistically significant difference in retention based upon hook types. Furthermore, this paper demonstrated that there is a statistically significant reduction in at-haulback mortality due to circle hook use. Another CPC referenced a separate paper presented to the SC-ECO that indicated that circle hooks would increase catch rate and mortality of various sharks and billfishes. That CPC noted the SC-ECO did not draw any conclusion on the effects of circle hooks. A US scientist noted that these comparisons were related to tuna hooks and were therefore not applicable to the discussion comparing catch rates associated with circle and J-hooks. This was later confirmed to be a comparison between tuna hooks and circle hooks and the SCRS Vice Chair noted that the overall effects of circle hooks on catch rates and mortality appear to be largely non-significant. The SCRS Vice Chair reported that "to increase the effectiveness of conservation measures for sea turtles, the Subcommittee on Ecosystems recommends the use of circle hooks for shallow longline sets," and recognizing the varying impacts of circle hooks on target and bycatch species as well as on fisheries, SC-ECO also recommended "continued analysis of the efficacy of circle hooks and the trade-offs across species in using them". Finally, a CPC raised concern that the use of monofilament leaders would negate catching blue shark in the North Atlantic, which is controlled by a TAC and national allocations and that there is no scientific evidence supporting the need for a fins attached measure. That CPC noted it could not support the U.S. proposal and indicated support for a full retention ban.

Draft recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries (Appendix 5)

The EU presented this draft recommendation, highlighting that the proposal included many placeholders in order to promote further discussion and focus the Panel's efforts on areas of similarities between proposals. Key aspects of the proposal include release of all live sharks, accounting for all forms of mortality, and minimum standards for safe handling practices. Some CPCs raised concern regarding the requirement to use data loggers and asked if there is any advice from the SCRS. The EU acknowledged that no scientific advice underpinned this provision, but such a practice would greatly increase data collection and allow for important questions to be addressed by the SCRS. One CPC questioned the timeline associated with data reporting, including whether monthly reporting of Task I data is appropriate; the EU indicated they have flexibility with this timeframe, but it was linked to improved tracking TAC and quota uptake. Two CPCs also had concerns regarding the proposed increase of observer coverage as there is already a requirement for longline vessels to increase their observer coverage in 2022 to 10% in Rec. 19-02 by human or electronic means, and ICCAT's Working Group on Integrated Monitoring Measures (IMM WG) has only this year just begun to discuss the development of standards and requirements for electronic monitoring systems given delays caused by COVID-19. One CPC suggested that it was unclear how the elements of the EU proposal would result in a mortality reduction sufficient to end overfishing or rebuild North Atlantic shortfin mako.

Draft recommendation by ICCAT on conservation of Atlantic shortfin mako caught in association with ICCAT fisheries (Appendix 6)

Canada presented the draft recommendation on behalf of all co-sponsors and highlighted the main component of its proposal - a full retention ban. Canada discussed the need for this ban based on SCRS advice. Canada also sought to clarify that its proposal was indeed inclusive of all forms of mortality and, therefore, the proposed ban would encompass the reductions put forth by the SCRS that are necessary to achieve rebuilding. Canada stressed that a retention ban is critical because it removes any incentive for fisheries-based interactions with the North Atlantic shortfin mako. Canada also noted the importance for Safe Handling Practices to ensure that any shark live at-haulback will be released in a manner that maximizes the likelihood of survival.

One CPC raised drafting concerns with the language in the draft recommendation and, in particular, the omission of any reference to crew safety during the handling of shortfin mako. Canada responded that these concerns would be addressed and suggested that it would be most beneficial to work on the Chair's proposal to try to build consensus. Some CPCs expressed the concern that a simple retention ban would not be sufficient to reduce total mortality and rebuild the stock. Several CPCs were supportive of the proposed retention ban and indicated it was the only way to remove the incentive for interacting with North Atlantic shortfin mako. The EU highlighted that, domestically, key Member States have limited the number of North Atlantic shortfin mako that can be retained and this would curb incentive, in addition to other approaches that could address this concern.

Canada also described the need to adopt provisions for South Atlantic shortfin mako but expressed flexibility noting that it may be more appropriate to create a separate measure for the distinct stocks.

Several observers intervened to stress the need to adhere to the SCRS advice for a full retention ban. The success of one CPC in implementing a retention ban that resulted in a decrease in landings and an increase in live releases was highlighted. The CPC with the greatest harvests of North Atlantic shortfin mako was criticized for not reporting any data on dead discards or live releases.

Draft recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries (Appendix 7)

The Chair introduced his draft recommendation proposal. He invited general comments and indicated his intention to then move to a paragraph-by-paragraph review of the document.

One CPC discussed three important components of rebuilding: ending overfishing immediately, establishing a trajectory back towards the green quadrant of the Kobe plot, and an acceptable probability that the stock will be rebuilt within an appropriate time frame. The SCRS Vice Chair confirmed that the column labeled "TAC" in the Kobe table is intended to be comprehensive of all forms of fishing-related mortality.

After numerous rounds of discussion, the Chair circulated a revised version of the draft recommendation, which is a joint text developed with input from numerous CPCs and based on the discussions outlined below. This version will be used as a basis for negotiations moving forward interessionally and into the annual meeting.

Paragraph 1

Numerous drafting suggestions were made by CPCs. Several CPCs requested that text be added to indicate that the stock should be rebuilt with a minimum level of probability, noting that this element is included in other ICCAT rebuilding programs. CPCs had diverging views on what probability of rebuilding should be specified, with some CPCs urging the Panel to accept a 70% likelihood of rebuilding as the appropriate probability for shark species and others noting that a 50-60% probability has been the standard in other ICCAT rebuilding programs. ICCAT has not yet adopted any rebuilding programs for sharks but has agreed retention bans for some shark species. There was some debate about what combination of measures would result in various levels of probability. The exact value was not agreed upon and the clause remains in brackets for further consideration.

One CPC provided edits to clarify that the scope of paragraph 1 is all vessels that may catch North Atlantic shortfin mako in association with ICCAT fisheries.

Paragraph 2 and Paragraph 2 alternative

Given the lack of consensus with respect to retaining North Atlantic shortfin mako, one CPC requested that including “retained catch” be placed in brackets. One CPC requested to include 500 t as a specific value for total mortality and explained that, according to SCRS advice, this value has a greater than 50% probability of rebuilding the stock by 2070. Another CPC suggested that 0 t should also be included to reflect proposals that prohibit retention, although it was noted that even under a “no retention” measure, total mortality of 0 t is not possible unless all fishing for any ICCAT species ceases, considering bycatch mortality. Further, (**Appendix 6**), co-sponsored by Gabon, Sierra Leone, the United Kingdom, Senegal, Chinese Taipei, Guinea-Bissau, and The Gambia, provides for retention of dead North Atlantic shortfin mako for CPCs with a landings requirement. These alternatives were reflected in brackets in the Chair’s proposal.

CPCs discussed whether post-release mortality should be included in this paragraph as it is addressed in Paragraph 9 and, further, it is difficult for CPCs to calculate accurately. One CPC highlighted that the quantitative advice from the SCRS include all forms of mortality and suggested that the recommendation should include post-release mortality and dead discards. Another CPC proposed that including these mortality factors further supports the need for a retention ban. Other CPCs disagreed, noting that no retention does not equate to no mortality. Ultimately, it was agreed to retain the reference to post-release mortality and place it in brackets.

On the final day of the meeting, Japan provided new language in “Japan’s proposal on paragraphs 2 and 3 of the Chair’s proposal” (**Appendix 8**) as Paragraph 2 (alternative). Japan stated that it basically supports the total retention ban, but as this is not likely to be a consensus, some compromise must be pursued. Japan also recalled other shark species subject to retention ban, which prevents the SCRS from assessing the stock status. Japan proposed that total allowable fishing mortality should be defined by paragraph 1 and total allowable retention should then be calculated by subtracting the mortalities (other than retention) from the total allowable mortality; the ability of CPCs to retain North Atlantic shortfin mako would then be based on the total allowable retention after taking into account all sources of mortality. Several CPCs expressed concerns that the new proposed text was complicated and additional time would be needed to consider it. One CPC noted that this proposed text could encourage CPCs to underreport and could also create a situation that would result in more dead discards than might otherwise be the case. Paragraph 2 (alternative) remains in brackets.

Paragraph 2bis and Paragraph 3 (regarding transshipment)

Both paragraphs concern the transshipping of the North Atlantic shortfin mako. CPCs provided different drafts of these paragraphs, with paragraph 3 being limited to transshipment and paragraph 2bis covering transshipping, retaining, and landing. Numerous CPCs believed paragraph 3 was preferred as transshipment should be considered separately, but consensus was not reached and both paragraphs were retained in brackets.

Paragraph 2bis (alternative) (regarding allocations)

In parallel with Paragraph 2 (alternative), Japan's submitted text also provided Paragraph 2bis (alternative) for consideration. This paragraph outlines the total allowable retention allocated to specific CPCs, noting other CPCs could be added, and that outside of this paragraph, retention, transshipping or landing would be prohibited. As with Paragraph 2 (alternative), CPCs requested more time to react to these additions and the paragraph remains in brackets.

Paragraph 3 (Alternative)

In parallel with Paragraph 2 (Alternative) and Paragraph 2bis (Alternative), Japan's submitted text also provided Paragraph 3 (Alternative). This paragraph allows retention of North Atlantic Shortfin mako contingent upon the stipulations in Paragraph 2 (Alternative) and Paragraph 2bis (Alternative), in addition to the verification that the fish is dead at-haulback via an onboard observer or electronic monitoring system. As with the other paragraphs provided by Japan's proposal, CPCs requested more time to react to these additions and the paragraph remains in brackets.

Paragraph 4

This paragraph provides an exception for CPCs with landing requirements. One CPC suggested adding text to clarify that the mortality status of a fish must be verified with an onboard observer or operating electronic monitoring system, and disagreed with the inclusion of 4d, which requires fins to be naturally attached for North Atlantic shortfin mako; this provision, and the entire paragraph, was bracketed.

Paragraph 4bis

This paragraph permitting retention under certain conditions was added to the Chair's proposal for consideration and discussion. One CPC highlighted that this paragraph allows for the harvesting of live North Atlantic shortfin mako. A few CPCs stated that they could not support the provision. The paragraph remains in brackets.

Paragraph 5

Paragraph 5 focused on the safe handling and release requirements for North Atlantic shortfin mako. One CPC requested that a provision be added to refer to 4bis. It was agreed that the first sentence in its entirety be placed in brackets pending the outcome of discussions on earlier paragraphs. A CPC requested that the potential review date of the minimum standards also be placed in brackets. Canada's proposed text for "Minimum standards for safe handling and live release procedures," as referenced in Paragraph 5, was incorporated in Annex 1 of the Chair's proposal and will be considered intersessionally.

Paragraph 6

Several CPCs provided drafting suggestions and one highlighted that listing criteria for exemptions to the Shark Implementation Check Sheet (Rec. 18-06) could be problematic due to procedures set forth by that Recommendation. The paragraph was modified to clarify references to Rec. 18-06 and remains in brackets.

Paragraph 7

In relation to reporting requirements, a CPC questioned how monthly reporting would be feasible when some CPCs struggle to report annually and asked how this information would be used if it could be reported. The proponent of monthly reporting replied that such reporting could be necessary for tracking TAC and catch limit uptake if these approaches are agreed. CPCs could not reach consensus on the proposed frequency of reporting and this frequency remains in brackets. Many CPCs highlighted the importance of reporting interaction data, including the confirmation of zero catch, dead discards, or live releases.

Paragraph 8

Two CPCs highlighted that ICCAT's IMM WG is addressing observer coverage and that this recommendation should not include such provisions. While acknowledging the work of the IMM Working Group, some other CPCs expressed a preference for retaining this paragraph. One CPC suggested that only CPCs that retain North Atlantic Shortfin mako should be subject to the provisions of this paragraph and another CPC requested that this paragraph only apply to CPCs whose vessels interact with North Atlantic shortfin mako. These views were not supported by some other CPCs and given the differences of view, this paragraph remains bracketed.

Paragraph 8bis

Paragraph 8bis describes the collection of biological samples during fishing operations. Several CPCs expressed support for the reference to Rec. 13-10, and it was clarified that CPCs should encourage the collection of biological samples from sharks that are dead at-haulback. This paragraph remains bracketed.

This paragraph on monofilament leaders and circle hooks was sourced from the U.S. proposal (**Appendix 4**), and some CPCs reiterated the concerns about these requirements expressed earlier in the meeting (see subheading of the U.S. draft proposal above). Due to lack of consensus, this paragraph remains in brackets.

Paragraph 9bis

This paragraph on mini data loggers was sourced from the EU proposal (**Appendix 5**), and some CPCs reiterated the concerns on this requirement of the EU proposal (see subheading above). Some CPCs suggested that this proposed requirement goes too far, and one CPC suggested that this requirement should only be applied to CPCs wishing to retain North Atlantic shortfin mako. Due to lack of consensus, this paragraph remains in brackets.

Paragraph 10

Numerous CPCs provided drafting input to refine the scope of this paragraph on scientific and research activities and there is general support for it as amended.

Independent of paragraph 10, the EU asked the SCRS Vice Chair about a paper (SCRS/2021/050), which was related to the 2017 Shortfin Mako Stock Assessment, presented to the Working Group on Stock Assessment Methods (WGSAM) meeting in May 2021. The Vice Chair provided a summary of the paper and the robustness of methods employed by the SCRS that would buffer the potential issues raised by the paper. Given the compressed schedule of the Shark Species Group meeting, the Vice Chair expressed that these concerns would likely be further addressed during the next stock assessment and that any specific questions from the Commission could be addressed in 2022.

Paragraph 11

Minor drafting suggestions were made to reflect several CPCs' interest in having the SCRS provide updated advice on mitigation measures to further reduce shortfin mako mortality, whenever new information becomes available and there was general support for this paragraph as amended.

Paragraph 11 bis

In regards to scheduling an intersessional meeting of Panel 4, concern was expressed that the text does not clarify the role of the SCRS in the process. This paragraph remains in brackets.

Paragraph 12

One CPC proposed a stock assessment of North Atlantic shortfin mako in 2024 to gauge the effectiveness of all measures in the proposed recommendation. It was suggested that such an assessment be a benchmark assessment rather than a simple update. As these terms have no official meaning in ICCAT, they have been placed in brackets. The SCRS Vice Chair clarified that, although there could be some review of a new

rebuilding program in 2024, there would be limited information with which to conduct such an evaluation, given the timelines for implementation and lag in reporting data. It was suggested, therefore, that a stock assessment could be carried out in 2024 with an additional evaluation of the implementation of the rebuilding program in 2027. These dates remain in brackets and language was included to provide flexibility to the SCRS in the case that evaluations could be conducted earlier.

Paragraph 12bis

Morocco requested the insertion of this paragraph to provide a derogation to paragraphs 8 and 9bis relating to observer coverage, electronic monitoring systems, and mini data loggers for longline vessels 12 m or less. This paragraph remains in brackets.

Paragraphs 13 and 14

Drafting suggestions were made out of concern that the previous language in Paragraph 13 could create loopholes regarding the implementation of this recommendation by allowing implementation later than its entry into force date. No drafting suggestions were made for Paragraph 14. There was general support by the Panel for both paragraphs.

6. Consideration of any additional mechanisms required to ensure the collection and provision of data

Given the scope of discussions under agenda item #5, no further comments were made under this Agenda item.

7. Development of appropriate requests for future work by the SCRS

The Vice Chair of the SCRS gave a presentation on the effects of circle hooks on targeted species and desirable and unwanted bycatch. This presentation was made in fulfilment of a request by the United Kingdom; it was highlighted that these updates, which were recently presented at the SC-ECO meeting, had yet to be adopted by the SCRS.

The Vice Chair highlighted the effect of circle hook use on the retention of numerous species and with a focus on shortfin mako, given the scope of the deliberations and the request of the UK. While previous meta-analyses demonstrated that circle hooks resulted in significantly higher retention of the shortfin mako, the Vice Chair noted a new paper (SCRS/2021/072) corrected for a confounding effect that incorrectly identified a bait effect as a hook effect. Upon this correction, it was found that there was no statistically significant difference in retention rates between circle hooks and J-hooks. The same study also noted a statistically significant reduction of 10% in at-haulback mortality due to circle hook use relative to J-hook use. The Vice Chair then described a study (SCRS/2021/068) which compared the effect of circle hooks and tuna hooks on catch and mortality rates. It was noted that for most of the species, the differences in catch and mortality rates appear to have overlapping credible intervals, so there was no conclusion that circle hooks exacerbate mortality or significantly increase catch rates. It was highlighted that these findings are not in comparison to J-hooks and since tuna hooks behave differently than J-hooks, the findings are not translatable. Overall, the Vice Chair highlighted the SC-ECO recommendations that state, to increase the effectiveness of sea turtle measures, circle hooks should be used in shallow sets and, that call for “continued analysis of the efficacy of circle hooks and the trade-offs across species in using them”.

In discussions of terminal gear modifications, the Vice Chair noted that under the auspices of the Billfish Species Group, a technical subgroup was created to address the request by the Commission detailed in Rec. 19-05 paragraph 21. This subgroup will provide feedback to the SCRS Billfish Species Group in September on both modifications to terminal gear and fishing practices. This feedback will include the state of knowledge for these topics, proposed study designs, and recommendations pursuant to paragraph 21 of Rec. 19-05.

8. Review of progress on northern swordfish (N-SWO) MSE process

The Vice Chair of the SCRS gave a presentation on the progress and status of the N-SWO Management Strategy Evaluation (MSE). The Vice Chair described the current Operating Model (OM), which uses specifications similar to the 2017 assessment model. The revised OM grid contains 216 OMs and covers a broad range of variables related to different management objectives. A website (<https://iccat.github.io/nswo-mse/>) was provided that contains links to trial specifications documents, Candidate Management Procedures (CMP), and other important details for the N-SWO MSE.

The Vice Chair then described the various Performance Metrics (PMs) with the MSE and requested feedback from the Panel on three key items: the desired probabilities for achieving the PMs, the time frame over which to calculate the PMs, and defining an appropriate management interval. Exceptional Circumstances (ECs) were also discussed, with the Vice Chair highlighting that the MSE roadmap indicates that in 2021, the SWGSM/PA4 is supposed to recommend a draft EC protocol for N-SWO. However, considering the present efforts from PA2 and the Albacore Species Group to develop an EC Protocol for northern Albacore, and the preference for consistency in EC decision rules, where appropriate, the Swordfish Species Group recommended a delay in the development of a N-SWO EC Protocol until PA2 and the ALB Species Group have completed that process and the outcomes can be considered in the context of the swordfish MSE. No concerns were expressed with this approach.

The advice intervals for running MPs and stock assessments were also discussed. The Vice Chair requested input from the Panel about the preference for advice intervals. Finally, the Vice Chair requested feedback on whether the interim limit reference (LRP) should be maintained at $0.4 \cdot B_{MSY}$.

One CPC provided feedback on numerous points and stated it would be useful to organize a dialogue between the Commission and the SCRS in 2022. Regarding probability for achieving the PMs, this CPC suggested that both 50% and 60% for stock status were sensible given previous plans, a less than 5-10% probability for being below B_{LIM} for safety, and a 15-25% maximum change in TAC related with stability. The CPC also suggested that, given the lifespan of the species, both short and medium options (corresponding to 1-10 and 11-30 years, respectively) should be considered for the time frame to calculate the PMs. Finally, the CPC requested that the SCRS provide advice on a catch limit for 2022 as the current TAC expires in 2021. The Vice Chair thanked the CPC for its views and encouraged others to provide input, acknowledging that ongoing dialogue between scientists and managers would be very useful.

9. Review of Mediterranean Swordfish fishing plans submitted in accordance with Rec. 16-05

The fishing plans of the following CPCs were reviewed: Algeria, the EU, Morocco, Tunisia, and Turkey. No comments were made on the fishing plans of the EU, Morocco, or Turkey.

The EU noted that in both Algeria's and Tunisia's fishing plans, there was a substantial increase in the authorized number of vessels. Given the provisions of Rec. 16-05, the EU inquired how this increase was consistent with the requirements of the recommendation. Both CPCs responded that the increase represented an artisanal fleet and that they remain in full compliance with the recommendation. The EU noted it had a different interpretation of the recommendation and, given the limited time, they indicated an interest in pursuing this issue bilaterally with both CPCs.

10. Consideration of criteria for granting exemptions to the submission of Shark and Billfish Check sheets, including frequency of exemptions

The Secretariat provided a brief overview of Recs. 18-05 and 18-06, as well as the reporting requirements established by each Recommendation. The criteria for exemption were discussed by the Secretariat, noting that CPCs must request exemptions from the SCRS. Two questions were raised: (1) what information do CPCs need to provide to the SCRS when seeking an exemption and (2) what should the frequency of requesting exemptions be? The SCRS Vice Chair described the criteria that CPCs must submit to the SCRS to be considered for exemption. With regards to timing, one CPC noted that given the effects of climate change on species distribution, it might be useful to define the timeframe for a periodic review as 3-5 years. Another CPC suggested that when recommendations or fishing behaviors change, CPCs should be required to request another exemption. With these suggestions, there was general endorsement of the criteria developed by the SCRS.

11. Other matters

The Co-convenor of the Sub-Committee on Ecosystems and Bycatch (SC-ECO) presented information on the possible use of the Ecosystem Report Card by Panel 4. The speaker highlighted the importance of continued dialogue with Panel 4 as the SCRS has plans to integrate Ecosystem-Based Fisheries Management (EBFM) into the ICCAT assessment and management process. Although the COVID-19 pandemic delayed progress on the ecosystem report card, this remains a priority for the SCRS. The speaker presented a visual to highlight the various components of the Ecosystem Report Card that would be of particular interest to fisheries managers. To conceptualize the use of the Ecosystem Report Card, the speaker provided multiple examples, including demonstrating the effect of ICCAT fisheries and management actions, summarizing the trends and status for key ecosystem components, and describing trends in key environmental pressures. The future challenges of the Ecosystem Report Card were discussed, including the need for feedback, support, and specialized expertise. The Chair thanked the speaker for his presentation.

Given the importance of developing new conservation and management measures for the North Atlantic stock of shortfin mako this year, many CPCs called for continued intersessional work in advance of the 2021 ICCAT Annual Meeting. Some CPCs suggested a correspondence period could be initiated to allow for continued feedback on the Chair's proposal. It was also suggested that another Panel 4 intersessional meeting was needed to reach consensus on a way forward. CPCs stressed the need to consider their positions with regard to North Atlantic shortfin mako based on the outcome of this meeting. In that regard, the timing of another Panel 4 meeting and any related correspondence process would need to take that into account to ensure productive discussions. The Chair took note of these matters. He indicated that he would work with the Secretariat to see what possibilities exist for another meeting later in the fall and he highlighted the need to continue to work via correspondence as well.

Several observers requested the floor to express their final thoughts. Most NGOs expressed gratitude for the progress made by Panel 4 but noted disappointment that the Chair's proposal is still heavily bracketed. CPCs were urged to work together to ensure a proposal could be adopted at the November annual meeting. Multiple NGOs conveyed grave concerns with the status of the stock, with some reiterating that the Panel should adopt measures with a 60-70% probability of rebuilding the stock by 2070. One NGO thanked the SCRS for their update on the N-SWO MSE and urged CPCs to provide input on this process. Other NGOs highlighted the need to address the sustainability of the South Atlantic shortfin mako stock and the Mediterranean swordfish stock.

12. Adoption of report and adjournment

The Chair noted that the revised Chair's proposal "Draft recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries" (**Appendix 7**) will be circulated with all track changes and brackets retained. He thanked the CPCs for their cooperation and concluded by honoring the memory of Dr Fábio Hazin.

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8. Review of progress on northern swordfish MSE process
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Appendix 3**Shortfin mako catches available in Task 1: North Atlantic Stock (ICCAT Secretariat)**

The ICCAT Task 1 database on nominal catches (T1NC) contains the best scientific estimates of the overall catches of all ICCAT managed species for the period 1950 to 2020. These catches are in weight (kg) and stratified by species, year, fishing flag/fleet, gear, stock, sampling area, catch type (landings, dead discards, live releases,), source of information (CPC submissions, SCRS estimates, other sources adopted by the SCRS, etc.), and others. For all species, the ICCAT CPC reported catches are always in whole weight, usually obtained by transforming product weights (gilled, gilled-gutted, head-off, etc.) into live weight equivalents using the conversion factors studied/adopted by the SCRS.

For a given species, the total biomass removals in a given year, only take into account the landing and the dead discards. The biomass discarded alive is not yet taken into account by the SCRS for the overall biomass removals, since for the majority of the species, the mortality rates of fish released alive are still uncertain.

The most up to date (as of 25/06/2021) T1NC information (t) for the shortfin mako (SMA) northern stock (SMA-N) for 2019 and 2020 are presented in **Table 1**. These catches, by year and flag, are discriminated by catch type [L: landings; DD: discards (dead); DL: discards (live)]. The historical northern Atlantic shortfin mako catch series by year and main gear are presented in **Figure 1**.

The detailed T1NC records can be consulted in the file “t1nc-SMA_20210706.xlsx”, available in the meeting [ownCloud folder](#).

Table 1. Shortfin mako (SMA) northern stock (SMA-N) catches for 2019 and 2020, by CPC, and catch type [L: landings; DD: discards (dead); DL: discards (live)].

CPC status	CPC Name	Flag name	Landings + Dead discards				discarded alive	
			L (landings)		DD (discards - dead)		DL (discards - live)	
			2019	2020	2019	2020	2019	2020
CP	BELIZE	Belize	2					
	CANADA	Canada	63	0	1	20	12	81
	CHINA PR.	China PR			20		7	
	EUROPEAN UNION	EU-España	866	919				
		EU-France	1		0		1	
		EU-Portugal	289	342				
	JAPAN	Japan	4		30	29		18
	KOREA REP.	Korea Rep	4		0			
	MAROC	Maroc	501	382				
	MEXICO	Mexico	2	2	0	0	1	1
	RUSSIA	Russian Federation	0		0			
	SENEGAL	Senegal	26					
	St VINCENT & GRENADINES	St Vincent and Grenadines	3					
	TRINIDAD & TOBAGO	Trinidad and Tobago	1	1	0	0		
	UNITED KINGDOM	Great Britain	0	0		0		
		UK-Bermuda	0	0	0	0	0	
		UK-British Virgin Islands		0		0		
		UK-Turks and Caicos		0				
	UNITED STATES	USA	57	61	1	2	23	31
	VENEZUELA	Venezuela	8					
NCC	Chinese Taipei	Chinese Taipei	0		1	0		
TOTAL			1829	1709	54	51	44	131

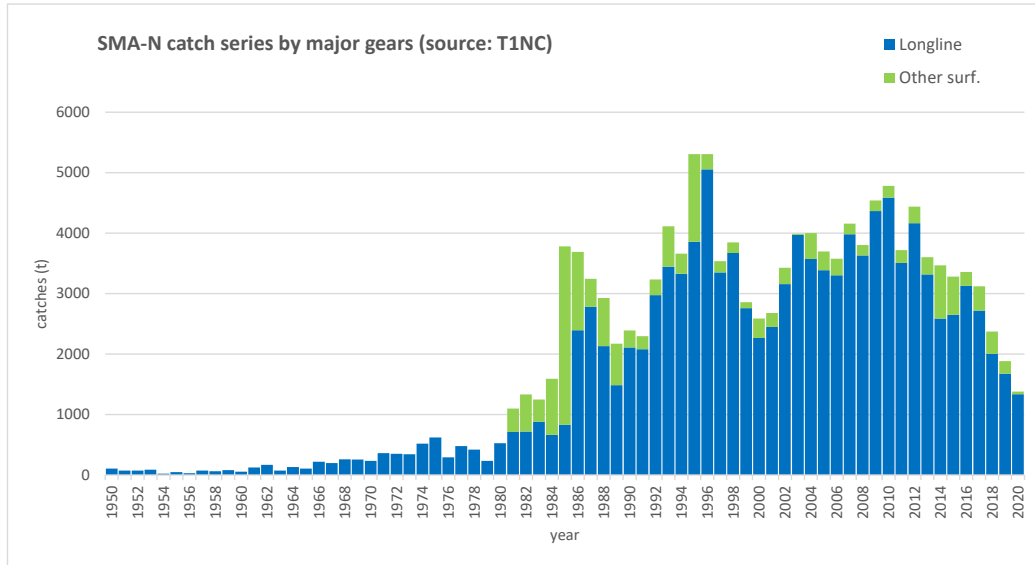


Figure 1. Northern Atlantic shortfin mako shark catches series by major gear between 1950 and 2020 (as of 06/07/2021, 2020 still preliminary and incomplete).

**Draft recommendation by ICCAT to establish
a rebuilding program for north Atlantic shortfin mako sharks caught
in association with ICCAT fisheries**
(a new proposal by the United States, previously presented as PA4-805/2020)

Explanatory Note

To accelerate the rate of recovery of the North Atlantic shortfin mako shark and to increase the probability of success, the SCRS recommended in 2019 that the Commission adopt a non-retention policy without exception. However, due to at-vessel and post-release mortality, a simple non-retention requirement is not expected to reduce mortality enough to stop overfishing and rebuild the stock. Additional efforts are needed to directly address these sources of mortality. The SCRS has suggested that gear modifications and time/area closures along with safe handling and release practices have the potential to further reduce mortality and support rebuilding. At the same time, it is critical to ensure that accurate data on all catches, including dead discards and live releases, are collected and reported to ICCAT. Reporting obligations already exist but few CPCs are reporting these data. As more CPCs ban retention and begin to release more North Atlantic shortfin mako, accurate information on the amount and disposition of catches will be key to future efforts of the SCRS to track rebuilding progress for this stock.

Taking all of this into account, the United States is seeking a measure that will effectively reduce mortality of North Atlantic shortfin mako in line with science to halt overfishing immediately and start the rebuilding process. To achieve this objective, our proposal calls for catches, including dead discards, to be reduced to 500 t beginning in 2022. Each CPC must take steps to immediately reduce its annual catch of North Atlantic shortfin mako by least 85% from its 2013-2015 average.¹ Toward that end, the U.S. proposal would generally prohibit retention of North Atlantic shortfin mako sharks – retention would be prohibited by CPCs unless and until the required catch reduction was achieved.

A CPC that achieves the required catch reductions could authorize its vessels to retain shortfin mako under very limited circumstances. In any such case, however, retained North Atlantic shortfin mako would be required to have its fins naturally attached until the first point of landing, as a means to improve the accuracy of landings data for this species and increase the monitoring and enforceability of this draft recommendation and of Recommendation 04-10. Those CPCs could retain shortfin mako if the shark is dead at haulback and the vessel has an observer or an operating electronic monitoring system onboard to verify the condition of the shark. The U.S. proposal also includes shortfin mako minimum sizes of at least 182 cm fork length for males and 280 cm fork length for females. These minimum sizes have been increased from the sizes established in Recommendation 19-06; the current proposal reflects the most recent biological information available² and provides additional protection for the stock.

The proposal also establishes requirements for gear changes that are essential to further reduce North Atlantic shortfin mako mortality, in particular a requirement that longline vessels use nylon monofilament leaders and large circle hooks. The requirement that longline vessels use nylon monofilament leaders and large circle hooks is based on recent scientific information on the effects of gear modifications. In 2017, the SCRS noted that the use of monofilament instead of steel traces or wire leaders is known to be effective at reducing shark bycatch in longline fisheries. In addition, a number of studies presented at tuna RFMO meetings have concluded that shark catch rates on longline gear, including shortfin mako shark catch rates, are lower on monofilament leaders compared to wire leaders. These studies further conclude that the use of monofilament leaders is an effective method for reducing shark bycatch and mitigating shark mortality in longline fisheries. In 2020, the Sub-Committee on Ecosystems stated that the “use of circle hooks in longline fisheries increases the at-haulback survival of shortfin mako shark” and reiterated its recommendation from 2019 that the Commission should adopt the use of circle hooks for shallow longline sets.

¹ This catch level represents the last three years of catches included in the 2017 stock assessment that first showed the stock was overfished.

² Natanson *et al.* 2020. Updated reproductive parameters for the shortfin mako (*Isurus oxyrinchus*) in the North Atlantic Ocean with inferences of distribution by sex and reproductive stage. Fishery Bulletin 118(1): 21-36.

In this proposal, non-reporting of data and other information is highlighted as a serious matter that results in loss of retention privileges for North Atlantic shortfin mako. Given the importance of reporting discard data for fisheries subject to no retention, lack of reporting will be referred to the Compliance Committee for appropriate action. Finally, as for some other ICCAT stocks, transshipment at-sea would be prohibited for any retained North Atlantic shortfin mako in order to strengthen the monitoring and control of this fishery. These additional measures are warranted to reduce all sources of mortality, improve data reporting as the foundation for future stock assessments, and deter any potential illegal, unreported and unregulated (IUU) fishing on this heavily overfished and vulnerable stock.

**DRAFT RECOMMENDATION BY ICCAT TO ESTABLISH A REBUILDING PROGRAM FOR
NORTH ATLANTIC SHORTFIN MAKO SHARKS CAUGHT IN ASSOCIATION WITH ICCAT FISHERIES**
(a new proposal by the United States, previously presented as PA4-805/2020)

RECOGNIZING that shortfin mako sharks are primarily caught in association with ICCAT fisheries and that the Commission has adopted management measures for shark species considered vulnerable to overfishing in ICCAT fisheries;

NOTING that the 2017 stock assessment found that there is a 90% probability of the North Atlantic shortfin mako stock being overfished and experiencing overfishing;

RECALLING measures adopted by the Commission to improve the status of shortfin mako sharks, including the *Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries* (Rec. 17-08 and 19-06), which implemented measures aimed at ending overfishing of the North Atlantic shortfin mako stock with a high probability, as the first step in the development of a rebuilding program;

CONSIDERING that the *Recommendation by ICCAT on the Principles of Decision Making for ICCAT Conservation and Management Measures* (Rec. 11-13) calls for the Commission to immediately adopt management measures designed to result in a high probability of ending overfishing in as short a period as possible and adopt a plan to rebuild the stock taking into account, *inter alia*, the biology of the stock and SCRS advice;

FURTHER NOTING that the Kobe II Strategy Matrix produced by the SCRS during a stock assessment update in 2019 indicated that a TAC of 500 t had a 99% probability of ending overfishing in 2020 and a 52% probability of rebuilding the stock by 2070;

ACKNOWLEDGING the need to establish an effective rebuilding program for North Atlantic shortfin mako, including immediate action to reduce fishing mortality to end overfishing;

UNDERSTANDING that the SCRS has further advised that to accelerate the rate of recovery and to increase the probability of success in rebuilding the stock, the Commission adopt a non-retention policy without exception;

KEENLY AWARE, however, that a reduction in incidental mortality, including dead discards, beyond what could be expected from a non-retention policy, is needed to increase the probability of successfully rebuilding North Atlantic shortfin mako shark;

ALSO RECOGNIZING SCRS advice on the need for Contracting Parties and Cooperating non-Contracting Parties, Entities, or Fishing Entities (hereinafter referred to as CPCs) to strengthen their monitoring and data collection efforts in support of future stock assessments, including but not limited to total estimated dead discards and the estimation of CPUE using observer data;

RESPONDING to the need for additional efforts to reduce the at-vessel mortality and increase post-release survivability of shortfin mako sharks that are incidentally hooked; and

FURTHER RESPONDING to the need for additional research on methods to reduce shortfin mako interactions in ICCAT fisheries, including identifying areas with high interactions;

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

1. A rebuilding program shall be implemented for North Atlantic shortfin mako (*Isurus oxyrinchus*), consistent with mortality levels recommended by the SCRS, to end overfishing immediately and rebuild the stock to biomass levels sufficient to support maximum sustainable yield (MSY) by 2070, a time frame which takes into account the biology of the stock. The provisions of this Recommendation apply to North Atlantic shortfin mako sharks caught in association with ICCAT fisheries.
2. Toward that end, total catches, including dead discards, of North Atlantic shortfin mako shall be reduced to 500 t in 2022 and be maintained at or below that level during the rebuilding period, unless changed by the Commission based on SCRS advice.
3. In order to achieve the mortality level established in paragraph 2, each CPC shall take steps to immediately reduce its annual catch of North Atlantic shortfin mako by at least 85% from the average of the CPC's 2013-2015 catch levels, beginning in 2022.
4. Unless and until the catch reductions in paragraph 3 are achieved, CPCs shall prohibit retaining onboard or landing, whole or in part, North Atlantic shortfin mako caught in association with ICCAT fisheries.
5. CPCs that achieve and maintain the reductions specified in paragraph 3 may authorize their vessels to retain onboard and land North Atlantic shortfin mako only if the fins remain naturally attached and one or more of the following conditions are met:
 - a. the shark is dead at haulback, and the vessel has an observer or an operating electronic monitoring system onboard to verify the condition of the shark; or
 - b. a CPC requires a minimum size of at least 182 cm fork length for males and of at least 280 cm fork length for females.
6. Notwithstanding paragraphs 4 and 5, a CPC may retain on board and land North Atlantic shortfin mako dead at haulback provided that it (1) prohibits North Atlantic shortfin mako shark fisheries; (2) requires that all dead fish be landed; (3) requires that North Atlantic shortfin mako be landed with their fins naturally attached; and (4) prohibits its fishermen from drawing any profit from such fish.
7. CPCs shall require that released North Atlantic shortfin mako are handled in a manner that causes the least harm to the shark, while giving due consideration to the safety of the crew, and that owners/operators and crew of vessels flying their flag to implement the Best Practices for Safe Handling and Release of Sharks contained in the **Appendix** to this recommendation.
8. Any CPC that authorizes retention or landing of North Atlantic shortfin mako pursuant to paragraph 5 or 6 above shall submit a revised shark implementation check sheet (Rec. 18-06) that includes all relevant information on implementation of this Recommendation, including applicable provisions of paragraphs 3, 5 and 6, together with a link to its relevant domestic laws and regulations. Any CPC that fails to report this information shall not be eligible to retain or land North Atlantic shortfin mako sharks unless and until the required reporting is made to ICCAT.
9. At-sea transshipment of North Atlantic shortfin mako is prohibited.
10. CPCs shall annually report, in accordance with SCRS data reporting requirements, total catches, including dead discards and live releases, of North Atlantic shortfin mako. Dead discards and live releases shall be estimated based on the total fishing effort of their relevant fleets using data collected through observer programs or other relevant data collection programs. Failure by a CPC to report required dead discard data, including reports of zero discards, is a serious violation, and the Compliance Committee shall consider appropriate actions. In addition, CPCs that authorize their vessels to retain on board and land North Atlantic shortfin mako pursuant to paragraph 5 or 6 above and fail to report their catch data, including dead discards and live releases, as required are prohibited from retaining North Atlantic shortfin mako until such data have been reported.

11. CPCs should encourage the collection of biological samples of North Atlantic shortfin mako, such as muscle, vertebrae, and reproductive tissues, consistent with the terms of this recommendation and according to the recommendations of SCRS.
12. In order to reduce total mortality of North Atlantic shortfin mako, including at-vessel and post-release, CPCs shall require that their longline vessels use nylon monofilament leaders and large circle hooks, which are fishing hooks with the point turned perpendicularly back to the shank to form a generally circular or oval shape, and the point of the hook is not offset more than 10 degrees.
13. To assist the Commission in considering other potential conservation and management measures for North Atlantic shortfin mako, the SCRS shall conduct a spatiotemporal analysis of North Atlantic shortfin mako catch and effort in order to identify areas with high interaction and provide advice to the Commission by 2023. CPCs shall provide all necessary data to support this effort by 2022, consistent with ICCAT data reporting requirements. In addition, the SCRS shall take into account other relevant information, including (a) life history traits, including growth and size at maturity by sex as well as any biologically important areas (e.g. pupping grounds, migration corridors) and (b) the effectiveness of gear modifications as mitigation measures to reduce North Atlantic shortfin mako shark mortality when providing advice to the Commission on other potential conservation and management measures.
14. The SCRS shall conduct a new stock assessment of North Atlantic shortfin mako no later than 2024 and evaluate progress toward the goals of the rebuilding program.
15. Taking into account the information and advice provided by the SCRS pursuant to paragraph 13 and 14, the Commission shall review the effectiveness of this rebuilding program in 2024 and consider the need for additional measures or other adjustments to this Recommendation.
16. This Recommendation repeals and replaces the *Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries* (Rec. 19-06).

Appendix to Recommendation

Best practices for the safe handling and release of sharks³

The following are best handling practices of sharks for both longline and purse seine fisheries. These best practices are appropriate for live shortfin mako sharks or live individuals of other shark species to be released under no-retention policies, as well as any live sharks of any species to be released voluntarily. For all gear types, keep animals in the water.

Safety First: These best practices should be considered in light of safety and practicability for crew. Crew safety should always come first. Crew should wear suitable gloves and avoid working around the jaws of sharks.

In longline fisheries, DO:

- Release all sharks while they are still in the water.
- If possible, use a dehooker to remove the hook or cut the hook with bolt cutters. If it is not possible to remove the hook, use a long-handled line cutter to cut the gear as close to the hook as possible (ideally leaving less than 0.5 meters of line attached to the animal).

In purse seine fisheries, DO:⁴

If in purse seine net:

- Release sharks while they are still free-swimming whenever possible (e.g. back down procedure, submerging corks, cutting net).

If in brail or on deck:

- For sharks that are too large to be lifted safely by hand out of the brailer, it is preferable they are released using a purpose-built large-mesh cargo net or canvas sling or similar device. If the vessel layout allows, these sharks could also be released by emptying the brail directly on a ramp held up at an angle that connects to an opening on the top deck railing, without need to be lifted or handled by the crew.
- Generally, small sharks are fragile and need to be handled very carefully. If this can be done safely, it is best to handle and release them with two people, or one person using both hands.
- When entangled in netting, if safe to do so carefully cut the net away from the animal and release to the sea as quickly as possible with no netting attached.

In longline fisheries and purse seine fisheries, DO NOT:

- Strike a shark against any surface to remove the animal from the line.
- Attempt to dislodge a hook that is deeply ingested and not visible.
- Try to remove a hook by pulling sharply on the branchline.
- Cut the tail or any other body part.
- Cut or punch holes through the shark's body.
- Gaff or kick a shark, and do not insert hands into the gill slits.
- Wait until hauling is finished to release sharks. Release them from the gear into the water as soon as possible.

Additional recommendation:

Tools should be prepared in advance (e.g., canvas or net slings or stretchers for carrying or lifting, large mesh net or grid to cover hatches/hoppers in purse seine fisheries, long handled cutters and de-hookers in longline fisheries).

³ Consistent with Western and Central Pacific Fisheries Commissions (WCPFC) best handling practices, 2018.

⁴ For further information, see Annex 3 to Chapter 4 of the ICCAT Manual, *Good practices to reduce the mortality of sharks and rays caught incidentally by tropical tuna purse seiners*.

**Draft recommendation by ICCAT on the conservation of North Atlantic stock
of shortfin mako caught in association with ICCAT fisheries**
(a new proposal by the European Union, previously presented as PA4-804/2020)

Explanatory Note

Following the lack of progress over the last two years on the adoption of new management measures for northern shortfin mako (SMA) in ICCAT, the European Union (EU) welcomes the opportunity to work with all ICCAT CPCs on this important issue during the upcoming intersessional meeting of Panel 4.

In 2020, the European Union tabled a proposal (PA4-804/2020) for a rebuilding plan that included the introduction of a Total Allowable Catch (TAC) of 500 t that according to SCRS would have ended overfishing within a year of its implementation. The proposal also mandated the SCRS to analyse the information on dead discards reported by the fleets and by the observers, with a view to advising the Commission on the level of total fishing mortality and possible requirement for adjusting the TAC. This TAC would have accommodated the landing of a limited amount of fish already dead when brought on-board the vessel, under the supervision of an observer. In addition, the proposal by the European Union also contained a range of mitigating measures, requested information from the SCRS to support additional measures to reduce mortality, and promoted the exchanges of best practices among CPCs, and crucially among operators.

While the context of the 2020 exchanges was particularly challenging, the European Union was disappointed by the lack of progress in ICCAT. Acknowledging the urgency to take action, in December 2020 the European Union adopted a unilateral catch limit of 288 t, corresponding to the proportion of the catches it could expect under a 500 t TAC at the ICCAT level. This catch limit is applicable from 1 January 2021, and exclusively for fish caught under the conditions of Paragraph 2(1) of Recommendation 19-06 (fish dead at haul-back and caught in the presence of an observer on-board). By adopting this unilateral catch limit, the European Union effectively reduces by more than 80% its landings compared to the period 2015-2019, bringing the level of exploitation by its fleets to a level consistent with the objective of ending overfishing and starting the rebuilding of the stock, which is consistent with both the ICCAT Convention and the EU's Common Fisheries Policy.

In addition, additional measures have been introduced at the national level in Spain, such as a limit on the maximum number of SMA, which can be landed by each vessel for each fishing trip. This limit of two SMA (still caught dead and in presence of an observer) per trip effectively removes any risk of vessels adopting fishing strategies to target SMA. This additional measure could be considered by ICCAT for the purpose of preventing the deliberate targeting of SMA, and therefore strictly restricting their catches to incidental bycatches. The European Union felt compelled to adopt these decisive measures in the absence of progress since ICCAT could not even agree to temporally improve the existing measures until new more comprehensive measures could be agreed, as the EU had suggested in both 2019 and 2020. These measures will apply exclusively to European vessels, and this requires significant efforts by the operators and administrations involved. This level of responsibility and accountability must in turn be recognised by the other CPCs when deciding on the most suitable management framework for SMA, since the implementation of any measures will concern the EU operators first and foremost.

Following Circular 2511/2021, and the way forward suggested by the ICCAT President and Officers, it is now reasonable to assume that a face-to-face Annual Meeting of the Commission is unlikely to happen this year. Last years' experience demonstrated that it is particularly challenging to make progress by correspondence and the Intersessional Meeting of Panel 4 will be no different. There is therefore a concrete risk that ICCAT could fail once again to agree on new measures for SMA. An agreement would be particularly challenging to reach given the focus on the discussions about the suitability of a retention ban as *the* solution for the situation of the stock. This is particularly regrettable considering the genuine intents of the sponsors of the three proposals discussed in 2020 to take action to end overfishing. This is also very disappointing since there is a great deal of convergence between these three proposals in terms of the need to adopt mitigating measures to reduce the mortality of these sharks in ICCAT fisheries.

Based on this understanding, and in view of the urgency for ICCAT to take action, the European Union believes that the discussions in the next intersessional meeting of Panel 4 should concentrate on agreeing on a package of mitigating measures, rather than to waste precious time in revisiting the polarizing issue of whether or not a retention ban would benefit the stock which at the end of the day is a rather binary issue that does not really require much technical preparation. On the other hand, the mitigation measures are of a nature that would benefit from technical preparations and could also build momentum for dealing with the more challenging issue at the annual meeting. This would hopefully allow CPCs to find agreement on a set of measures, which could be crucial in reducing mortality. Furthermore, this could result in building the required level of trust to allow for a more constructive discussion in the autumn on the type of catch limits (TAC vs retention ban) that could be agreed on.

For these reasons, the European Union decided to bracket and add placeholders to the elements of its proposal PA4-804, thereby allowing discussions to instead focus on the other measures.

**DRAFT RECOMMENDATION BY ICCAT ON THE CONSERVATION OF
NORTH ATLANTIC STOCK OF SHORTFIN MAKO CAUGHT IN ASSOCIATION WITH ICCAT FISHERIES**
(a new proposal by the European Union, previously presented as PA4-804/2020)

Disclaimer: The request from the ICCAT President for early submission of proposals to facilitate the intersessional work in 2021 has not allowed the European Union to conduct the required level of consultations with its Member States and stakeholders. These consultations will not be completed until the third quarter of this year, and the final position of the EU will not be established until then. The EU however wishes to contribute to the important discussions within the framework proposed by the ICCAT Chair and therefore submits this draft proposal without prejudice to its final position and notes the positions expressed in this draft may be subject to possible future revisions.

ACKNOWLEDGING the outcome of the stock assessments conducted by the SCRS in 2017, which indicates that there is a 90% probability of the stock of North Atlantic shortfin mako being overfished and experiencing overfishing;

FURTHER ACKNOWLEDGING that updated projections, conducted by the SCRS in 2019, emphasize that the stock size will decrease up to 2035, regardless of the management measures implemented;

RECALLING that according to its Convention, the stated objective of ICCAT is to maintain the stocks at levels which will permit the maximum sustainable catch and which will ensure the effective exploitation of these fish in a manner consistent with this catch;

FURTHER NOTING that the updated projections conducted by the SCRS in 2019 also demonstrate that any constant annual catch level equal to or below 500 t will immediately halt overfishing and would thus maintain fishing mortality at or below F_{MSY} in line with the Convention objectives while also allowing the recovery of the stock by 2070 with a probability higher than 50%;

[...]

TAKING INTO ACCOUNT that complementary management measures such as reduction of soak time (e.g. duration fishing operations, number of deployed hooks, etc.) and time-area closures (e.g. avoidance of hotspot areas, depths, etc.) have the potential to further reduce mortality;

ALSO TAKING INTO ACCOUNT that the level of catch and effort data and their coarse spatial discrimination, as currently submitted to the Secretariat, make it impossible at this time to identify the benefits of potential time/area closures and soak time provisions;

ACKNOWLEDGING that the reduction of catches achieved since 2017 through the avoidance by the fleets of areas with high concentration of shortfin mako, as identified by fishing operators, offers evidence of the existing scope for further reduction of the fishing mortality through this approach;

NOTING that these successful strategies to avoid shortfin mako have been based on fishermen's knowledge and that this information is not necessarily available to the SCRS or to all CPCs, and that there is therefore a need to promote the sharing of best practices;

[...]

NOTING that the existing scientific literature refers to mortality rates at-haulback ranging between 33 and 36% for Atlantic shortfin mako;

RECOGNIZING that the SCRS recommends that CPCs strengthen their monitoring and data collection efforts to monitor the future status of this stock, including but not limited to the estimation of total dead discards and the estimation of CPUE using observer data;

NOTING that the collection of the information required for the monitoring of the stock is contingent on an increase of the observer coverage and on the use of electronic monitoring systems (EMS);

NOTING the SCRS response 19. 5 emphasizing that higher resolution spatial catch and effort data would be necessary to identify areas of high interactions that would be practical for the implementation of closed areas with a high probability of protecting mako shark and minimize negative impacts on the target species;

ALSO TAKING INTO ACCOUNT that the SCRS has already adopted and recommended the implementation of minimum standards (SCRS/2016/180) for the use of EMS for purse seine vessels in the tropical tuna fishery;

ALSO NOTING the SCRS response 19. 12 for which the available ST-09 data for longline fleets targeting tropical tunas will be used to estimate by-catch from these fleets in 2020 by taking into account 1) a method to raise the available data to represent total by-catch and 2) the taxonomic level for reporting by-catch;

RECALLING the *Recommendation by ICCAT on biological sampling of prohibited shark species by scientific observers* (Rec. 13-10);

ALSO RECALLING the existing obligations of Contracting Parties, non-Contracting Parties, Entities and Fishing Entities (CPCs) to require the collection of discard data in their existing 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);

RECALLING the *Recommendation by ICCAT to Establish Minimum Standards for Fishing Vessel Scientific Observer Programs* (Rec. 16-14);

RECALLING the provisions of the *Resolution by ICCAT on Criteria for the Allocation of Fishing Possibilities* (Res. 15-13), notably the criteria for the allocation of fishing possibilities set out in part III, and the need to ensure that these are applied in a fair, equitable and transparent manner;

[...]

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

Live Release and TAC

1. The Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing Entities hereinafter referred to as CPCs, whose vessels have been catching northern shortfin mako in the North Atlantic, shall implement a rebuilding plan starting in 2021, with the goal of ending overfishing by 2023, and gradually bringing the stock biomass back to B_{MSY} .
2. All fishing vessels operating in ICCAT managed fisheries shall promptly release all specimens of North Atlantic shortfin mako caught alive in a manner that causes the least harm and that maximizes post-release survival, while ensuring the safety of crew members. In particular:
 - a) CPCs shall ensure that the minimum standards for safe handling and live release procedures, as specified in **Annex 1**, are implemented while taking into consideration the safety of the crew; the fishing vessels shall have readily available on deck, where crew can get it quickly, lifting device, bolt cutters, dehooker/disgorger and line-cutter for safely release of individuals caught.
 - b) CPCs shall 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 necessary equipment for the release of shortfin mako specimens in accordance with the minimum standards for safe handling procedures as specified in **Annex 1**. These minimum standards, however, do not replace possible stricter guidelines established by CPCs national Authorities.

[...]

4. CPCs shall ensure that recreational and sport fishing vessels release alive all caught specimens of shortfin mako. These operators shall not be entitled to retain onboard, tranship, land, store, sell, or offer for sale any part or whole carcass of shortfin mako. Recreational and sport fishermen shall implement the minimum standards for safe handling and live release procedures as indicated in **Annex 1**.

[...]

6. Each CPC shall take the necessary measures to ensure that all catches by vessels flying its flag are recorded and communicated without delay to the competent authority.
7. CPCs shall report on a monthly basis, within 15 days of the end of the period during which the catches were made, to the ICCAT Secretariat the amount of northern shortfin mako caught by vessels flying their flag. These monthly catch reports shall indicate the quantities caught, discarded live, discarded dead and kept onboard.

[...]

Scientific Observers and Electronic Monitoring System

9. CPCs shall ensure that all longline fishing vessels, *as well as rod and reel recreational/sport fisheries*, shall gradually increase their observer coverage to 20% by 2023 at the latest and in accordance with provisions of the Recommendation 16-14. This increase in the coverage, should be supported either by means of the deployment of human observers on board vessels or by means of suitable EMS.

Gear provisions

10. CPCs shall ensure that, from 1 January 2022 onwards, all their longline fishing vessels have installed mini data loggers on the mainline and on the branchlines to record at least the depth, setting/hauling time, and temperature. The SCRS is requested to provide guidance on the basic characteristics, minimum number and positions to install the mini data loggers with a view to have a better understanding of the effects of the soaking time, fishing depths and environmental characteristics underpinning higher incidental catches of shortfin mako.

Data Collection, reporting and scientific activities

11. CPCs shall ensure that the skippers of their commercial and recreational/sport fishing vessels record on their fishing logbooks and landing declarations, or equivalent document for the sport/recreational fisheries, the number and weight of the shortfin mako caught, discarded dead, and released alive, by estimated/measured body length and sex during each fishing operation.
12. The data shall be reported to the national or regional/local Authorities in accordance with their regulatory procedures and with a timing adequate to monitor the monthly consumption of their fishing opportunities as required by paragraph 7 above.
13. The data collected by the observers or the EMS referred to under paragraph 3 of this Recommendation shall be analyzed and submitted by the CPCs to SCRS at the latest 90 days before the ICCAT Annual Meeting.

[...]

15. The ICCAT Secretariat in close coordination with the SCRS shall verify that the current Statistical Forms are adequate to the scope of reporting the information as required by paragraphs [...], 6, 7, and 20 above. Otherwise, revised statistical forms shall be presented for adoption by the SCRS in 2022.
16. In their Annual Reports, CPCs shall inform the Commission of steps taken to implement the provisions of this Recommendation through domestic law or regulations, including monitoring, control and surveillance measures.

17. CPCs are encouraged to investigate at-vessel and post-release mortality of shortfin mako including, but not exclusively, the application of hook-timers and of satellite tagging programs to investigate the effectiveness of this measure.
18. In 2027, the SCRS shall conduct a stock assessment for North Atlantic shortfin mako, and provide stock projections under the various models considered. Following this stock assessment, the SCRS shall advise on the conservation effectiveness of the fisheries management measures established by this Recommendation and provide scientific advice for possible deliberations by the Commission. The SCRS shall also analyze the information on dead discards reported by the fleets and by the observers, with a view to advising the Commission on the level of total fishing mortality.
19. Starting in 2021, the Secretariat shall report annually on the implementation of this Recommendation and on required adjustments by each and every CPC with a history of shortfin mako by-catches.
20. Notwithstanding the reporting and stock assessment calendars established above, the SCRS is required to advise at the earliest possible time, on the spatio-temporal identification of nursery areas/pupping grounds and on likely hotspots (areas of high concentration) and areas of permanent or seasonal by-catches. In particular, the SCRS should explore the association between shortfin mako sharks and preys to identify areas and/or periods of high concentration of shortfin mako, establish if there are consistent patterns of association over time in specific areas, and if spatio-temporal closures would be relevant to reduce encounter and mortality rates. Based on this advice, the Commission should consider further refining and integrating the provisions of this Recommendation to enhance the level of shortfin mako conservation and the rate of recovery of the stock.
21. In 2022, an Intersessional Meeting of Panel 4 shall take place to promote the sharing between CPCs of best practices, to reduce encounter with, catches and fishing mortality of shortfin mako sharks. Panel 4 shall seek the input from fishing operators and scientists and shall encourage their participation to this meeting, and then provide a set of recommendations to the Commission on the most efficient technical measures likely to reduce fishing mortality for shortfin mako.
22. The SCRS should work with the PWG to advise by 2022 at latest on the implementation of minimum standards for the use of EMS in longline fishing vessels for swordfish as well as for tropical and temperate tuna fisheries.
23. Notwithstanding the provisions of Article VIII, paragraph 2 of the Convention, CPCs shall implement this Recommendation as soon as possible in accordance with their regulatory procedures.
24. This Recommendation replaces and repeals the *Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries* (Rec. 19-06).

Minimum standards for safe handling and live release procedures⁵

The following steps should be followed to reduce stress and injury to incidentally caught shortfin mako specimens for a maximum probability of shark survival while minimizing the safety risk to the crew. Skippers and crew should always put their personal safety first when releasing sharks, rays and other large fish. Wear gloves and avoid working around the jaws of sharks and tails of rays. These basic guidelines do not replace stricter safety rules possibly 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 shark 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 and crew at high speed.
- Do not remove the alive shark from the water boatside, while safely removing the hook.
- Do not gaff the fish in the body.
- 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 shark is vigorously twisting and spinning making it too dangerous to use a dehooker/disgorger or the shark 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.
- In purse seine fishing, some sharks tend to spin and roll themselves in the net. If entangled sharks are lifted up with the net towards the power block, this is dangerous to both the sharks and the crew. Thus, it is important to scan the net as far ahead as possible to spot the sharks as early as possible to react quickly and avoid that are lifted up with the net towards the power block. The speed of the net reel must be reduced to slacken the tension of the net and allow the entangled animal to be removed from the net. If necessary, use clippers to cut the net.
- If, for whatever reason, a shark must be brought on the deck then minimise the time it takes to return it to the water to increase survival and reduce risks to the crew.
- Do not wrap your fingers, hands or arms in the line when bringing a shark or ray to the boat – you might get pulled overboard.
- Always approach the shark from behind, particularly if it has been brought on board; remain behind the head.
- Do not lift them using the branchline, especially if hooked.
- Do not lift using thin wires or cables or by the tail alone.
- Lifting should be undertaken with a minimum of two wide slings to support the weight of the animal whilst it is out of the water.
- Do not expose the shark to the sun for extended periods.
- If you anticipate that it will require more than 5 minutes to release a shark, then place a hose into its mouth so seawater is moderately flowing into it.
- It is best to handle medium to large sharks with two persons.
- You can calm a shark down by covering its eyes with smooth, wet and dark cloth.
- To prevent bites place an object, such as a fish or big stick in the jaw.

⁵ The guidelines are a reasoned compilation of recognized advices available at <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

**Draft recommendation by ICCAT on conservation of Atlantic shortfin mako
caught in association with ICCAT fisheries**

(a new proposal, submitted by Canada, Gabon, Sierra Leone, and the United Kingdom, Senegal, Chinese Taipei, Guinea-Bissau, and The Gambia previously presented as PA4-806/2020)

RECALLING that the Commission adopted management measures for shark species considered vulnerable to overfishing and caught in association with fisheries managed by ICCAT, including the bigeye thresher shark (*Alopias superciliosus*) (Rec. 09-07), oceanic whitetip shark (*Carcharhinus longimanus*) (Rec. 10-07), hammerhead shark (family Sphyrnidae) (Rec. 10-08), silky shark (*Carcharhinus falciformis*) (Rec. 11-08), and porbeagle (*Lamna nasus*) (Rec. 15-06);

RECOGNIZING the numerous attempts made by the Commission to reduce threats to the North Atlantic shortfin mako shark through various Recommendations since 2004, all of which express concern for the status of the stock and request that Contracting Parties reduce fishing mortality;

RECALLING the ecological risk assessments carried out by the SCRS in 2008 and 2012 which indicate that shortfin mako ranks third in the vulnerability table;

NOTING that shortfin mako is caught in association with ICCAT fisheries and that the 2017 and 2019 SCRS assessments concluded that the North Atlantic stock is in the red zone of the Kobe plot, meaning that it is overfished and that overfishing continues, while also noting that there is a high risk that the South Atlantic stock may follow a similar path;

RECOGNIZING that the SCRS recommends that CPCs strengthen their monitoring and data collection efforts to monitor the status of these stocks, including total estimated dead discards and the estimation of CPUE using observer data;

RECOGNIZING FURTHER that the SCRS has recommended a non-retention policy, without exceptions, for North Atlantic shortfin mako in 2017 and 2019, and has recommended that catches of South Atlantic shortfin mako should not exceed the lowest catch level in the five years preceding the assessment (2011-2015), i.e. 2,001 t;

CONSIDERING that the *Recommendation by ICCAT on the Principles of Decision Making for ICCAT Conservation and Management Measures* (Rec. 11-13) calls for the Commission to immediately adopt management measures, taking into account, *inter alia*, the biology of the stock and SCRS advice, designed to result in a high probability of ending overfishing in as short a period as possible;

CONSIDERING FURTHER that Rec. 11-13 calls for the Commission to adopt a plan to rebuild stocks in the red zone of the Kobe plot, taking into account, *inter alia*, the biology of the stock and SCRS advice;

NOTING that some strategies to avoid shortfin mako are based on harvesters' knowledge and that this information is not necessarily available to the SCRS or to all CPCs, and that there is therefore a need to promote the sharing of best practices;

ACKNOWLEDGING that according to SCRS studies, the survival rate after release of shortfin mako is approximately 70%;

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

North Atlantic shortfin mako

1. Contracting Parties, or Cooperating non-Contracting Parties, Entities or Fishing Entities (hereinafter referred to as “CPCs”) shall prohibit retaining onboard, transshipping, or landing part or whole of a North Atlantic shortfin mako caught in any of the fisheries managed by ICCAT.
2. A rebuilding program shall be implemented to rebuild North Atlantic shortfin mako (*Isurus oxyrinchus*) to biomass levels sufficient to support maximum sustainable yield (MSY) by 2070. The provisions of this Recommendation apply to North Atlantic shortfin mako sharks caught in association with ICCAT fisheries.
3. CPCs shall require vessels flying their flag to promptly release unharmed, to the extent practicable, all North Atlantic shortfin mako when brought alongside the vessel.
4. CPCs shall require that owners/operators/crew of vessels flying their flag take all reasonable steps to ensure the safe release of sharks by following a “best practices for safe handling and release of sharks”, to be agreed to and adopted by the Commission no later than [2022].
5. Collection of biological samples during commercial fishing operations shall comply with the *Recommendation by ICCAT on biological sampling of prohibited shark species by scientific observers* (Rec. 13-10).
6. The prohibition on retention referred to in paragraph 1 shall not apply to CPCs whose domestic law requires that any dead fish be landed, provided that:
 - a) The fish is dead on haulback;
 - b) Directed fishing for shortfin mako sharks is prohibited;
 - c) Fishers are not permitted to draw any commercial value from the landing of such fish; and
 - d) The amount of landed shortfin mako is reported in the CPC’s Shark Implementation Check Sheet, as required by Recommendation 18-06 and any future successor or revision thereto.
7. In their Shark Implementation Check Sheets, CPCs shall inform the Commission of measures taken to implement this Recommendation through laws or national regulations, including monitoring, control and surveillance measures in support of implementation of this recommendation.

South Atlantic shortfin mako

8. The annual TAC for 2022 and subsequent years is 2,001 t for South Atlantic shortfin mako and shall remain in place until it is revised based on scientific advice.
9. If the total catch of South Atlantic shortfin mako averages more than 2,001 t in two consecutive years, the Commission shall review the implementation and effectiveness of these measures.

Data reporting

10. CPCs shall record in their observer programmes the number of shortfin mako discarded and released, indicating the status (alive or dead) and report to ICCAT in accordance with the ICCAT data reporting requirements.
11. CPCs shall also continue to complete and submit the ICCAT Shark Implementation Check Sheet.

Scientific research

12. CPCs shall collaborate, to the extent practicable, with the SCRS’s Shark Research and Data Collection Program to conduct research on shortfin mako shark in the Convention area.

13. The SCRS shall continue to prioritize research into: potential spawning areas; mitigation measures aimed to further reduce shortfin mako mortality; and other areas the SCRS deems helpful to improve stock assessments.
14. The SCRS shall provide to the Commission by [2024] updated advice on mitigation measures aimed to further reduce shortfin mako mortality.
15. The SCRS shall provide to the Commission by 2024 a schedule for the next stock assessment.
16. This recommendation repeals and replaces the *Recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries* (Rec. 19-06).

Draft recommendation by ICCAT on the conservation of North Atlantic stock of shortfin mako caught in association with ICCAT fisheries
(a proposal by the Commission Chair)

Explanatory Note

In 2019 it was difficult to reach consensus and only limited measures were adopted on the conservation of North Atlantic shortfin mako shark, a stock that shows signs of major concerns. In 2020 new proposals were tabled but no further developments on a way forward could be achieved.

The three proposals that have been tabled to Panel 4 in 2021 on the conservation of North Atlantic shortfin mako shark, are basically those presented in the year before. These are documents:

- PA4-07 presented by the USA, previously presented as PA4-805/2020;
- PA4-08 by the EU, previously presented as PA4-804/2020; and
- PA4-09 presented by Canada and co-sponsored by Gabon, Sierra Leone, the United Kingdom, Senegal, Chinese Taipei, Guinea-Bissau, and The Gambia, previously presented as PA4-806/2020.

At this stage, in light of the recent difficult and unforeseen circumstances resulting from the loss of the Panel 4 Chair, as I believe that it is essential to avoid repeating the scenario faced last year, I have taken the decision to table a Chair's proposal that could hopefully provide a good starting point for negotiations.

However, the current proposal did not result from informal exchanges with the proponents of the documents listed above, and therefore should not be taken as some sort of agreement. Instead, the current proposal is the result of my own analysis of the content of three proposals tabled in regard to major components of those documents, which are gathered in the attached **Appendix**. Hopefully, this matrix will allow Panel 4 members to more fully consider the various elements of the three proposals before and during the intersessional meeting and compare the various provisions in the proposals tabled by CPCs.

I have taken note that there are some common ideas to the tabled proposals, which correspond to the clean text in my proposal. There are also some opposite views on relevant aspects, which I have left to be filled later once we have begun the discussions. On the other hand, I believe there are components where it might be possible to develop some common ground, which correspond to text that I have kept in brackets in my proposal. In my experience, this is a normal way of working when trying to focus discussions and find ways forward.

Accordingly, the current proposal should be identified as the work of the Chair and not a product of joint work, through consultations with, or agreement by the proponents of the three proposals already tabled. That said, I hope that progress can be made within the context of the upcoming intersessional meeting of Panel 4, that I consider a critical first step of exchange of views by Heads of Delegation on the full range of issues already on the table to further develop the process of finding a way forward for the conservation of the North Atlantic shortfin mako shark.

**DRAFT RECOMMENDATION BY ICCAT ON THE CONSERVATION OF NORTH ATLANTIC STOCK OF
SHORTFIN MAKO CAUGHT IN ASSOCIATION WITH ICCAT FISHERIES**
(a proposal by the Commission Chair)

RECOGNIZING that shortfin mako sharks are primarily caught in association with ICCAT fisheries and that the Commission has adopted management measures for shark species considered vulnerable to overfishing in ICCAT fisheries;

NOTING that shortfin mako is caught in association with ICCAT fisheries and that the 2017 and 2019 SCRS assessments concluded that there is a 90% probability of the North Atlantic shortfin mako stock being overfished and experiencing overfishing, meaning that it is overfished and that overfishing continues;

RECALLING that according to its Convention, the stated objective of ICCAT is to maintain the stocks at levels which will permit the maximum sustainable catch and which will ensure the effective exploitation of these fish in a manner consistent with this catch;

RECALLING measures adopted by the Commission to improve the status of shortfin mako sharks, including the *Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries* (Rec. 17-08 and 19-06), which implemented measures aimed at ending overfishing of the North Atlantic shortfin mako stock with a high probability, as the first step in the development of a rebuilding program;

CONSIDERING that the *Recommendation by ICCAT on the Principles of Decision Making for ICCAT Conservation and Management Measures* (Rec. 11-13) calls for the Commission to immediately adopt management measures designed to result in a high probability of ending overfishing in as short a period as possible and adopt a plan to rebuild the stock taking into account, *inter alia*, the biology of the stock and SCRS advice;

ACKNOWLEDGING the need to establish an effective rebuilding program for North Atlantic shortfin mako, including immediate action to reduce fishing mortality to end overfishing;

ALSO RECOGNIZING SCRS advice on the need for Contracting Parties and Cooperating non-Contracting Parties, Entities, or Fishing Entities (hereinafter referred to as CPCs) to strengthen their monitoring and data collection efforts in support of future stock assessments, including but not limited to total estimated dead discards and the estimation of CPUE using observer data;

FURTHER RESPONDING to the need for additional research on methods to reduce shortfin mako interactions in ICCAT fisheries, including identifying areas with high interactions;

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

Rebuilding programme objectives

1. The Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing Entities (hereinafter referred to as “CPCs”), shall implement a rebuilding programme for North Atlantic shortfin mako shark starting in 2022 to end overfishing immediately and gradually achieving biomass levels sufficient to support maximum sustainable yield (MSY) by 2070 with a probability of at least [XX%].
2. Toward that end, total fishing mortality, including [retained catch], dead discards [and post-release mortality], of North Atlantic shortfin mako shall be reduced to [0/XXXX/500] t in 2022 and be maintained at or below that level during the rebuilding period, unless changed by the Commission based on SCRS advice.
2. (Alternative) [Toward that end, the following rules shall be applied to calculate the total allowable retention of North Atlantic shortfin mako:
 - a) The total allowable fishing mortality shall be established based on para 1 and the most recent Kobe II risk matrix for North Atlantic shortfin mako projection results (the probability of both $F < F_{MSY}$ and $SSF^6 > SSF_{MSY}$).
 - b) The total allowable retention shall be calculated by subtracting the mortalities other than retention from the total allowable fishing mortality. The mortalities other than retention shall be estimated by the SCRS based on the data submitted by CPCs as well as scientific evidence.
 - c) If the total allowable retention is at or less than zero, CPCs shall prohibit retaining onboard, transshipping or landing, whole or in part, North Atlantic shortfin mako caught in association with any of the fisheries managed by ICCAT.
 - d) If the total allowable retention is more than zero, CPCs may catch and retain up to the amount.
 - e) The calculation of the total allowable retention shall be conducted every year using updated data and scientific evidence.]
- 2bis [Furthermore, CPCs shall prohibit retaining onboard, transshipping or landing, whole or in part, North Atlantic shortfin mako caught in association with any of the ICCAT fisheries.]
- 2bis (Alternative) [For 2022, the total allowable retention shall be allocated to the following CPCs⁷. The other CPCs shall prohibit retaining onboard, transshipping or landing, whole or in part, North Atlantic shortfin mako caught in association with any of the fisheries managed by ICCAT.

European Union: XXX t
Morocco: YYY t
United States: ZZZ t
???:]
3. [CPCs shall prohibit transshipping of North Atlantic shortfin mako caught in association with ICCAT any of the fisheries managed by ICCAT in any circumstances.]
3. (Alternative) [The retention by these CPCs shall be allowed only when the fish is dead on haulback [and the vessel respects the provision of Rec.- 16-14 parag. 4b by having onboard an observer] [has an observer] or an operating electronic monitoring system on board to verify the condition of the shark. If a CPC cannot implement this requirement due to the size of its vessels, the allocation shall be reduced by XX%]]

⁶ SSF is Spawning stock fecundity, which is used for Kobe II risk matrix for North Atlantic shortfin mako.

⁷ These figures may be zero.

4. [The prohibition on retention referred to in paragraph 3-2bis shall not apply to [\[Norway/CPCs\]](#) whose domestic law requires that any dead fish be landed, provided that:
 - c) The fish is dead on haulback, [\[and having onboard an observer or an operating electronic monitoring system on board to verify the condition of the shark\];](#)
 - d) Directed fishing for shortfin mako sharks is prohibited;
 - e) The amount of landed [North Atlantic](#) shortfin mako is reported in the CPC's Shark Implementation Check Sheet, as required by Recommendation 18-06 and any future successor or revision thereto;
 - f) [\[North Atlantic shortfin mako be landed with their fins naturally attached; and\]](#)
 - g) Fishermen are prohibited from drawing any [commercial value](#)~~profit~~ from such fish.]

[4bis \[Taking into account the necessary mortality reductions specified in paragraph 2 above and notwithstanding the prohibition on retention in paragraph 3 above, any CPC that achieves and maintains at least an 85% reduction in its annual catch from the average of its 2013-2015 catch levels may authorize their vessels to retain onboard and land North Atlantic shortfin mako provided that the fins remain naturally attached to the carcass and one or more of the following conditions are met:](#)

- [a\) the shark is dead at haulback, and the vessel has an observer or an operating electronic monitoring system onboard to verify the condition of the shark; or](#)
- [b\) a CPC requires a minimum size of at least 182 cm fork length for males and of at least 280 cm fork length for females.\]](#)

Safe handling and release

5. [Starting on 1 January [\[2022\]](#), CPCs shall require vessels flying their flag to promptly release unharmed, to the extent practicable, all live North Atlantic shortfin mako when brought alongside the vessel, while giving due consideration to the safety of the crew [except as otherwise provided in paragraph \[4bis\].](#) The minimum standards for safe handling and release of North Atlantic shortfin mako sharks shall apply, as provided under **Annex 1** of this Recommendation. These minimum standards [may be revised by the Commission whenever considered necessary and new information following SCRS scrutiny and advice becomes available, but no later than \[202X\].](#)]

Requirements for reporting on implementation

6. [\[CPCs shall submit a Shark Implementation Check Sheet to provide information on how this Recommendation is implemented in accordance with Rec. 18-06. If the Compliance Committee determines that any CPC fails to report as required by Rec. 18-06, that CPC shall immediately require its fishing vessels to refrain from \[retaining, transshipping\] or landing North Atlantic shortfin mako sharks until the required reporting is made to ICCAT.\]](#)
7. CPCs shall report at a minimum [\[monthly/quarterly/annually\]](#) to the ICCAT Secretariat, in accordance with ICCAT data reporting requirements, [\[total catches\]](#), including [\[landings,\]](#) dead discards and live releases, of North Atlantic shortfin mako. [CPCs shall estimate dead](#) discards and live releases based on the total fishing effort of their relevant fleets using data collected through observer programs or other relevant data collection programs. Failure by a CPC to report required dead discard and live release data, including [failure to submit](#) reports of zero discards and zero releases, is a serious violation, and the Compliance Committee shall consider appropriate actions. In addition, [if the Compliance Committee determines that](#) CPCs that authorize their vessels to retain on board and land North Atlantic shortfin mako pursuant to paragraph [\[X\]](#) fail to report their catch data, including dead discards and live releases, [the CPCs concerned shall require their fishing vessels to refrain](#) from retaining North Atlantic shortfin mako until such data have been reported.

Biological sampling and observer coverage

8. [\[CPCs \[that retain North Atlantic shortfin mako sharks\] shall gradually increase the observer coverage of all longline fishing vessels \[targeting ICCAT species that have potentially have accidentally interactions with North Atlantic shortfin mako sharks\] to \[10/20%\] by \[2023\] at the latest. This increase in the coverage should be implemented in accordance with provisions of the Recommendation 16-14 either by means of the deployment of human observers on board vessels or through the use of EMS, taking into account minimum standards to be agreed by ICCAT, based on advice from SCRS and PWG.\]](#)

~~8bis [The observer is also encouraged to collect, from dead specimens at haulback, biological samples such as muscular tissues (for stock identification) reproductive organ with embryo (for identification of pregnancy cycle and reproductive output) and vertebrae (for estimation of growth curve). The biological samples collected by the observer should be analysed by CPCs concerned and the results should be submitted to the SCRS by CPCs concerned.]~~

[8bis \(alternative\) \[Collection of biological samples during commercial fishing operations shall comply with the Recommendation by ICCAT on biological sampling of prohibited shark species by scientific observers \(Rec. 13-10\).\] CPCs should encourage the collection of biological samples of North Atlantic shortfin mako dead specimens at haulback, such as muscle, vertebrae, and reproductive tissues, consistent with the terms of this recommendation and -according to the recommendations of SCRS.](#)

Gear modifications

9. [\[In order to reduce total mortality of North Atlantic shortfin mako, including at-vessel and post-release, CPCs shall require that their longline vessels use nylon monofilament leaders and large circle hooks, which are fishing hooks with the point turned perpendicularly back to the shank to form a generally circular or oval shape, and the point of the hook is not offset more than 10 degrees.\]](#)

[9bis \[CPCs \[retaining North Atlantic shortfin mako shark\] shall ensure that, from \[1 January 2022\] onwards, all their longline fishing vessels \[targeting ICCAT species that have potential interactions with shortfin mako sharks\] have installed mini data loggers on the mainline and on the branchlines to record at least the depth, setting/hauling time, and temperature. The SCRS is required to provide guidance on the basic characteristics, minimum number and positions to instal the mini data loggers with a view to have a better understanding of the effects of the soaking time, fishing depths and environmental characteristics underpinning higher incidental catches of shortfin mako.\]](#)

Scientific and research activities

10. The SCRS shall continue to prioritize research into: [identifying mating, pupping and nursery grounds, and other high concentration areas of North Atlantic shortfin mako; options for spatial-temporal measures, gear mitigations measures \(including gear configuration\)](#) aimed at further improving stock status; and other areas the SCRS deems helpful both to improving stock assessments and reducing shortfin mako mortality. [In addition, CPCs are encouraged to investigate at-vessel and post-release mortality of shortfin mako including, but not exclusively through, the incorporation of hook-timers and of satellite tagging programs.](#)

11. The SCRS shall provide to the Commission by 2024, [and whenever new information becomes available,](#) updated advice on mitigation measures aimed to further reduce shortfin mako mortality. For that purpose, CPCs shall provide [any relevant](#) data to support SCRS [analysis of this matter](#).

[11bis \[In \[2022\], an intersessional meeting of Panel 4 shall take place to promote the sharing between CPCs of best practices, to reduce encounter with, catches and fishing mortality of shortfin mako sharks. Panel 4 shall seek the input from fishing operators and scientists and shall encourage their participation to this meeting, and then provide any recommendations to the Commission on the most efficient technical measures likely to reduce fishing mortality for shortfin mako.\]](#)

Next stock assessment and review of measures effectiveness

12. The SCRS shall conduct a [benchmark/full] stock assessment of North Atlantic shortfin mako by ~~in~~ [2024]. In addition, the SCRS shall provide by [2027] at the latest, an evaluation of the effectiveness of actions taken pursuant to this recommendation to achieve the objectives of the rebuilding programme.

12bis [By derogation to paragraphs 8 and 9bis above, the measures relating to the observer coverage and EMS as well as the installation of mini registers shall not apply to longliners of 12 m or less.]

13. Notwithstanding the provisions of Article VIII, paragraph 2 of the Convention, CPCs are strongly encouraged to implement, in accordance with their regulatory procedures, this Recommendation as soon as possible ~~in accordance with their regulatory procedures~~ and before the date of its entry entering into force of this Recommendation in accordance with Article VIII.

Repeal

14. This Recommendation replaces and repeals the *Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries* (Rec. 19-06).

Minimum standards for safe handling and live release procedures

The following provides minimum standards for safe handling practices of sharks, general recommendations for all shark fisheries, and specific recommendations for both longline and purse seine fisheries.

These minimum standards are appropriate for live shortfin mako sharks and other live shark species when released [whether under no-retention policies, or when released voluntarily]. These basic guidelines do not replace any stricter safety rules that may have been established by the National Authorities of individual CPCs.

Safety First: These minimum standards should be considered in light of safety and practicability for crew. Crew safety should always come first. At a minimum, crew should wear suitable gloves and avoid working around the mouths of sharks.

Training: The Secretariat and SCRS should develop materials to support the training of fishing operators to implement this safe handling protocol. These materials should be made available to CPCs in the three ICCAT official languages.

To the greatest extent practicable, all sharks being released should remain in the water at all times. This includes cutting the line to free the shark while it is still in the water, using bolt cutters or dehooking devices to remove the hook if possible, or cutting the line as close to the hook as possible (and so leaving as little trailing line as possible).

Be prepared: Tools should be prepared in advance (e.g., canvas or net slings, stretchers for carrying or lifting, large mesh net or grid to cover hatches/hoppers in purse seine fisheries, long handled cutters and de-hookers in longline fisheries, etc., listed at the end of this document).

General recommendations for all fisheries:

- If operationally safe to do so, stop the vessel or substantially reduce its speed.
- When entangled (in netting, fishing line, etc.), if safe to do so, carefully cut the net/line free from the animal and release to the sea as quickly as possible with no entanglements attached.
- Where feasible, and while keeping the shark in the water, try to measure the length of the shark.
- To prevent bites, place an object, such as a fish or big stick/wooden pole, in the jaw.
- If, for whatever reason, a shark must be brought on the deck then minimise the time it takes to return it to the water to increase survival and reduce risks to the crew.

Longline fisheries specific safe-handling practices:

- Bring the shark as close to the vessel as possible without putting too much tension on the branchline to avoid that a released hook or branchline break could shoot hook, weights and other parts toward the vessels and crew at high 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.
- If hooked, and the hook is visible in the body or mouth, use a dehooking device or long-handled bolt cutter to remove the hook barb, and then remove the hook.
- If it is not possible to remove the hook or the hook cannot be seen, cut the line of the trace (or snood, leader) as close to the hook as possible (ideally leaving as little line and/or leader material as possible and no weights attached to the animal).

Purse seine fisheries specific safe-handling practices:

- If in purse seine net: Scan the net as far ahead as possible to spot the sharks early to react quickly. Avoid lifting them up in the net towards the power block. Reduce vessel speed to slacken the tension of the net and allow the entangled animal to be removed from the net. If necessary, use clippers to cut the net.

- If in brail or on deck: Use a purpose-built large-mesh cargo net or canvas sling or similar device. If the vessel layout allows, these sharks could also be released by emptying the brail directly on a hopper and release ramp held up at an angle that connects to an opening on the top deck railing, without need to be lifted or handled by the crew.

DO NOT (all fisheries):

- Lift sharks from the water using the branchline, especially if hooked.
- Lift sharks using thin wires or cables, or by the tail alone.
- Strike a shark against any surface to remove the animal from the line.
- Attempt to dislodge a hook that is deeply ingested and not visible.
- Try to remove a hook by pulling sharply on the branchline.
- Cut the tail or any other body part.
- Cut or punch holes through the shark.
- Gaff or kick a shark, or insert hands into the gill slits.
- Expose the shark to the sun for extended periods.
- Wrap your fingers, hands or arms in the line when bringing a shark or ray to the boat (may result in serious injury).

Useful tools for safe handling and release:

- Gloves (shark skin is rough; ensures safe handling of shark and protects crew's hands from bites).
- Towel or cloth (a towel or cloth soaked in seawater can be placed on the eyes of the shark; used to calm sharks down)
- Dehooking devices (e.g., pig tail dehooker, bolt or plier cutters)
- Shark harness or stretcher (if needed)
- Tail rope (to secure a hooked shark if it needs to be removed from the water)
- Saltwater hose (If anticipated that it may require more than 5 minutes to release a shark, then place a hose into its mouth so seawater is moderately flowing into it. Make sure deck pump has been running several minutes before placing it in a sharks mouth)
- Measuring device (e.g., mark a pole, leader and float, or a measuring tape)
- Data sheet for recording all catch
- Tagging gear (if applicable)

Japan's proposal on Paragraphs 2 and 3 of the Chair's Proposal

Explanatory note

Japan submitted a proposal to replace paragraphs 2 and 3 in the revised Chair's proposal during the last Panel 4 meeting. Japan feels that the intention of the proposal was not necessarily understood. To facilitate understanding of Panel 4 members and contribute to the discussion at the next Panel 4 meeting if it is held, Japan submits a slightly revised proposal with a supplementary document as attached.

JAPAN'S PROPOSAL ON PARAGRAPHS 2 AND 3 OF THE CHAIR'S PROPOSAL

2. Toward that end, the following rules shall be applied to calculate the total allowable retention of North Atlantic shortfin mako:
 - a) The total allowable fishing mortality shall be established based on para 1 and the most recent Kobe II risk matrix for North Atlantic shortfin mako projection results (the probability of both $F < F_{MSY}$ and $SSF^1 > SSF_{MSY}$).
 - b) The total allowable retention shall be calculated by subtracting the mortalities other than retention from the total allowable fishing mortality. The mortalities other than retention shall be estimated by the SCRS based on the data submitted by CPCs as well as scientific evidence.
 - c) If the total allowable retention is at or less than zero, CPCs shall prohibit retaining onboard, transshipping or landing, whole or in part, North Atlantic shortfin mako caught in association with any of the fisheries managed by ICCAT.
 - d) If the total allowable retention is more than zero, CPCs may catch and retain up to the amount.
 - e) The calculation of the total allowable retention shall be conducted every year using updated data and scientific evidence.
- 2bis. For 2022, the total allowable retention shall be allocated to the following CPCs². The other CPCs shall prohibit retaining onboard, transshipping or landing, whole or in part, North Atlantic shortfin mako caught in association with any of the fisheries managed by ICCAT.

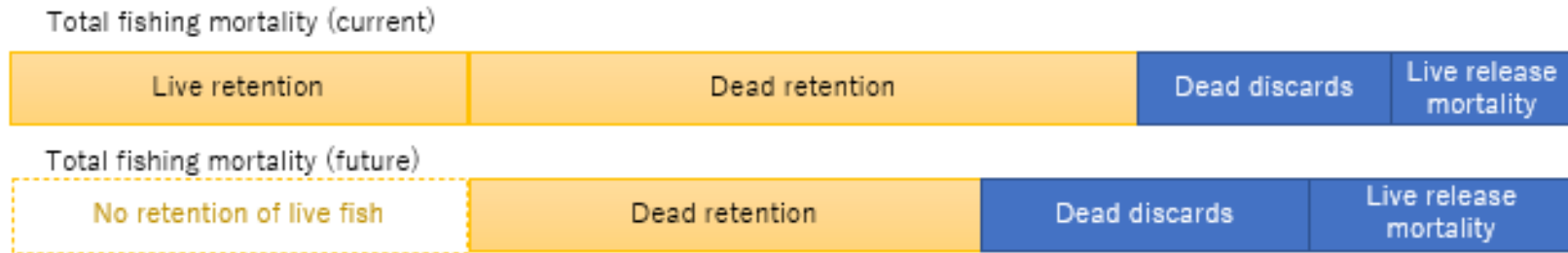
European Union: XXX t
Morocco: YYY t
United States: ZZZ t
???:
3. The retention by these CPCs shall be allowed only when the fish is dead on haulback and the vessel has an observer or an operating electronic monitoring system on board to verify the condition of the shark. If a CPC cannot implement this requirement due to the size of its vessels, the allocation shall be reduced by XX% based on the past data on the proportion of dead and live.³

¹ SSF is Spawning stock fecundity, which is used for Kobe II risk matrix for North Atlantic shortfin mako.

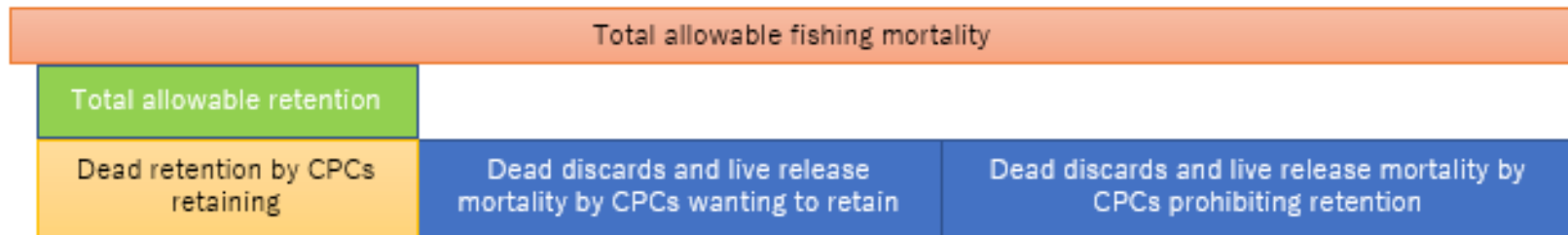
² These figures may be zero.

³ For example, if the past data indicate that the proportion of live fish is 50%, the allocation shall be reduced by 50%.

Concept of paragraph 2



Case 1 (Total allowable retention is more than zero)



Case 2 (Total allowable retention is zero)



Example of calculation

The assumption is that 30% of live release is dead.

	Live retention	Dead retention	Dead discards	Live release	Live release mortality	Total mortality
CPCs for prohibition of retention (past 3 years)	100	50	3	2	0.6	153.6
CPCs for retention (past 3 years)	600	400	18	12	3.6	1021.6
Total	700	450	21	14	4.2	1175.2
CPCs for prohibition of retention (future)	0	0	53	102	30.6	83.6
CPCs for retention (future)	0	*1	18	612	183.6	*1
Total	0	*1	71	714	214.2	*1

*1: The total mortality other than retention is 285.2 t (71+214.2). If the total allowable mortality is 700 t, the total allowable retention is 414.8 t (700-285.2). Since this figure is larger than the past 3-year average of dead retention by CPCs wanting to retain (400 t), the total allowable retention can be set at 414.8 t. On the other hand, if the total allowable mortality is 500 t, the total allowable retention is 214.8 t (500-285.2), which is smaller than 400 t. In this case there will be no total allowable retention.

Statement by Brazil of Grief, Condolences and Sharing

Dear Mr. Delegates, dear listeners, dear ICCAT Staff, dear Mr. Chair.

We, the Brazilian delegation, would like to express our deepest gratitude for all the condolences and sympathy expressed at the Commission level, as well as in many other forums where Professor Fabio Hazin left his mark, his influence and his collaboration.

Fabio was of an extraordinary talent and intelligence, the members of this Commission know how much this Brazilian had the ability to add, to highlight details that for many would go unnoticed and in certain moments, how he was able to illuminate apparently lost discussions.

Fabio, for the last 20 years, was the Brazilian name in Fisheries, and had an obvious and important role in the Commission and especially in Panel 4, which is vacant, and whose vacancy we suggest be filled by ICCAT guidelines and protocols.

Brazil abdicates the indication, we do not have at this moment a name or even conditions to recommend a replacement, we are humble and sensible in recognizing the need of structuring our delegation after this loss and, in honour of the always coherent Fabio Hazin, recommend that the chairmanship of panel 4 be conducted by the Commission itself.

As Brazilians, Latin Americans, we are culturally emotional and you cannot imagine how much the departure of this human being, teacher, friend and father has affected us. It is difficult to describe, we know that here understanding is easier, because somehow we all lived with the Professor, but of course, there is a sense of civility that does not escape us, he defended Brazil with claws and teeth, he was a citizen in his fullness. He graduated many classes at the University, gave many master's and doctoral degrees, lived very closely with some of those who today sit as delegates, orphans they feel, still living an immense emptiness that only time, understanding, and the resumption of new challenges and fruits will soften.

So we come to declare, as Brazilians, friends and fans, our thanks and common feeling, we have lost a great human being, we have lost a champion.

May in some way his spirit, his perspectives and feelings be perpetuated and prevail in this commission, in the difficult task of consensus and flexibility that the Commission is assigned to perform.

Thank you all very much.

Brazilian ICCAT Delegation

Statement by Canada to Panel 4 in regard to North Atlantic shortfin mako

Canada would like to reiterate its thanks to the Commission and Panel 4 Chair for the opportunity to engage on the issue of shortfin mako conservation in 2021 despite ongoing challenges stemming from the COVID-19 pandemic. We look forward to continuing to work with other Panel 4 CPCs, including co-sponsors of the joint proposal, the European Union and the United States of America as proponents of the other proposals, and other CPCs, to advance our common goal of increasing protection and conservation of this iconic species.

Following on the submission of our joint proposal (PA4_09), we and other CPCs have begun bilateral work to clarify items in each proposal, and to look for common ground. Those initial discussions have been helpful in identifying areas of convergence, as well as areas that will require more work, and we appreciate the level of ambition evident in these early discussions. It is clear that all CPCs engaged in these discussions agree on the need to make concrete progress this year, and we look forward to continuing to work with all CPCs ahead of the PA4 intersessional.

To briefly highlight a few fundamental elements of the discussion, as all CPCs are aware, in order to support conservation and rebuilding of the species any new ICCAT recommendation must lead to a substantial reduction in overall mortality, including dead discards and post-release mortality. A central consideration as we move forward in the discussions will be to come to a common understanding of the various sources of shortfin mako mortality, their relative proportions, and the extent to which various management options, including those in each of the current proposals, will reduce total mortality enough to support rebuilding of the species.

Canada's view continues to be that the best way to achieve the required mortality reduction is through a full ban on retention of shortfin mako, as recommended by the SCRS. A retention ban would remove any economic benefit from capturing mako, and would provide an indirect incentive to avoid areas where shortfin mako are prevalent. Any avoidance behaviour by the fleet in response to a retention ban would effectively be a form of spatial management for shortfin mako, and would provide immediate protection for the population while we work collectively to develop any other appropriate measures. While we understand that a retention ban is not the only way to reduce total mortality, we agree with the SCRS that it would be the most effective component of a suite of measures to give the stock the best chance at rebuilding.

Statement by the European Union to Panel 4 in relation to proposals PA4_07 and PA4_09

The European Union (EU) would like to thank the proponents of proposals PA4_07 (USA) and PA4_09 (Canada and others) regarding northern shortfin mako sharks.

The EU's concerns, already expressed last year in document PA4_814/2020, remain, but we would at this stage rather highlight the growing similarities between the various proposals in order to reach agreement on a common set of measures, which would benefit shortfin mako sharks.

- In particular, we note that all three proposals are now advocating the adoption of a rebuilding plan with the objective of reaching B_{MSY} by 2070 and ending overfishing within a year. This is a realistic timescale considering the projections provided by the SCRS, and there are various options identified by the SCRS for reaching these objectives and that should allow us to focus the future discussions at the annual meeting on the remaining key issue of a recovery plan, namely the probabilities required for reaching these objectives.
- In addition, all three proposals identify the requirement to increase post release survival by adopting best practices for safe handling. Both proposals PA4_07 (USA) and PA4_08 from the EU also provide minimum standards for safe handling and live release procedures.
- Similarly, all three proposals also emphasise the need to improve data collection, and sometimes provide suggestions on how this could be achieved.
- Finally, all three proposals also identify requests for the SCRS to provide additional information, which would allow the future improvement of the rebuilding plan and would lead to faster recovery of the stock.

While the European Union continues to have concerns with certain aspects of proposals PA4_07 and PA4_09, and that this prevents it from supporting them, it reiterates its willingness to work with the proponents of these proposals in order to adopt measures that could reduce the mortality of northern shortfin mako sharks. Initial exchanges between the CPCs suggest that there is a significant scope for agreeing on common measures, which would benefit the stock.

Statement by the United States to Panel 4

In considering the three proposals on North Atlantic shortfin mako (PA4_08, PA4_09 and PA4_07), we note that there are some promising areas of convergence. All acknowledge the need to rebuild the North Atlantic shortfin mako stock. The U.S. and Canadian proposals include a prohibition on retention of North Atlantic shortfin mako as the baseline measure and would ban at-sea transshipment. All three proposals call on the SCRS to conduct further research and analyses, including on the impacts of mitigation measures.

There are also important points of distinction among the proposals. The United States emphasizes that a North Atlantic shortfin mako rebuilding program must have a catch reduction target that accounts for all sources of fishing mortality. PA4_08 and PA4_09 do not account for dead discards. Under the no retention approach in PA4_09, shortfin mako dead discards would, at the current catch levels, exceed those recommended by the SCRS to achieve rebuilding by 2070.

A key component of rebuilding is ensuring a reduction in total shortfin mako fishing mortality - including for released fish. This includes, and even goes beyond, safe handling and release practices. It is unclear how rebuilding can be achieved by proposals PA4_08 and PA4_09, as they do not include immediate solutions to minimize bycatch mortality. Both proposals lack requirements for gear modifications - such as using nylon monofilament leaders and large circle hooks. These relatively small adjustments to terminal gear have been shown to minimize at-haulback mortality and hooking injury for shortfin mako, without increasing catch rates.

Regarding the new measures for recreational fisheries proposed in PA4_08, while many CPCs have active recreational fisheries targeting shortfin mako, no CPC other than the United States has been reporting these catches or managing these fisheries. The United States questions how CPCs that currently are not monitoring or managing their recreational fisheries would meet requirements to ensure live release or provide observer coverage in those fisheries.

Regarding data reporting more generally, it is critical that data from all fisheries are collected through logbooks, observer programs, and other appropriate means, and that these data are reported in compliance with existing requirements. That said, the United States does not see the utility of requiring monthly reporting of mako catches to ICCAT. Such a step is not necessary to ensure the effective management of fisheries by CPCs. Regarding the paragraph on electronic monitoring minimum (EM) standards in PA4_08, the United States is not convinced this language is needed in this recommendation, given the consideration of EM standards and requirements already underway by both the SCRS and the IMM Working Group in response to the requests made by ICCAT on this matter in 2019.

SCIAENA Opening Statement to the Panel 4 Intersessional Meeting ICCAT 2021

With the cancellation of last year's Commission meeting and the limited discussions at Panel 4 level, 2021 presents the CPCs with a key responsibility – to adopt with no further delay urgent and effective conservation measures to protect and recover the stock of one of the most threatened shark species in the Atlantic – Shortfin mako shark.

For Sciaena, the advice provided in 2017 and reinstated again in 2020 by SCRS is clear and provides direct measures that must be taken with the utmost urgency in order to give Shortfin mako the best chances of recovering in the shortest amount of time.

We took due note and analysed the proposals presented so far by CPCs on Shortfin mako. Although there are elements that would be beneficial to the conservation of Shortfin mako in the Atlantic in all the proposals, it is our understanding that only proposal PA4-809 with the sponsoring Canada, Gabon, Sierra Leone, the United Kingdom, Senegal, and Chinese Taipei fully acknowledges the dire state that the population is in and fully takes into account the crucial elements of the SCRS advice, namely the clear call for a full retention ban of this species in the north Atlantic.

Similar situations have happened in the past and a ban on retention was applied for other sensitive shark species, and there is little doubt that this measure is long overdue for Shortfin mako. Additionally, we welcome the adoption of other measures that may reduce bycatch of this species, as well as efforts to increase observer coverage and remote electronic monitoring to increase the chances of compliance to newly adopted regulations.

Therefore, we encourage all CPCs to endorse and further strengthen PA4-809.

Pro Wildlife Statement to ICCAT Panel 4

The precarious situation of endangered shortfin mako sharks in the Atlantic is highly alarming. Science is very clear and immediate action is needed: Fishing of mako sharks in the North Atlantic must be stopped. Already four years ago the scientific body of ICCAT (SCRS) has recommended a complete retention ban for mako sharks in the North Atlantic and a TAC of not more than 2001 tonnes in the South Atlantic. This would also remove financial incentives for fishermen not to immediately release bycaught specimens.

In light of the depleted populations the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has listed mako sharks in its Appendix II, making a Non-Detriment-Finding (NDF) needed for any introduction from the sea. Accordingly, in December 2020, in the absence of solid NDFs, the Scientific Review Group (SRG) of the European Union passed a [negative opinion for the introduction from the sea of shortfin mako](#) from both the North Atlantic stock and from Senegal into the EU.

A decision by ICCAT is overdue and we urge Parties to come to an agreement at Panel 4. In this respect we fully support Proposal [PA4-09/i2021](#) submitted by Canada and co-sponsored by the United Kingdom, Gabon, Sierra Leone, and Senegal, in line with the SCRS advice.

In contrary, we are deeply concerned about the unilateral TAC of 288 t, which has been recently adopted by the EU. This decision is in contradiction to the [European Union's efforts as a co-proponent to list mako sharks in CITES App II](#) in 2019. Furthermore, it does not only ignore the recommendation of the SCRS, but also the negative opinion of the EU's own SRG. We urge Parties to not support Proposal [PA4-08/i2021](#) as it would only delay an urgently needed agreement.

In addition, we are disappointed to see that the USA has resubmitted its proposal for a TAC of 500 t from last year [[PA4-07/i2021](#)].

We call on the US and the EU to follow scientific advice and to support a North Atlantic retention ban and a South Atlantic TAC for the mako shark without further delay, as Canada and others have proposed.

Finally, it is important for ICCAT to agree on additional measures aiming the reduction of shark bycatch and mitigating shark mortality in longline fisheries. Documents [PA4-07/i2021](#) and [PA4-08/i2021](#) provide several measures for gear modification, safe handling practices, and observer coverage, which are a promising approach. But those measures are not an alternative for a retention ban, but a needed supplement.

We call on the members of ICCAT to end the delays and secure a brighter future for this extraordinary species now, so these animals can recover and fulfil their central role in pelagic ecosystems again.

Pro Wildlife Statement to ICCAT PA4, Round 3
[PA4-23/i2021]

In our [Opening Statement \[PA4-18/i2021\]](#) we highlighted our concerns regarding the precarious situation of endangered shortfin mako sharks in the Atlantic and welcomed the decision of the Scientific Review Group (SRG) of the European Union in December 2020, as a consequence of the CITES Appendix II listing of mako sharks and in the absence of solid Non-Detriment Findings, to pass a [negative opinion for the introduction from the sea of shortfin mako](#) from both the North Atlantic stock and from Senegal into the EU.

We urge the ICCAT Parties to use the Panel 4 meeting to finally achieve an agreement on the mako shark, in line with the SCRS advice and the precautionary approach.

In this regard we appreciate the [Commission Chair's proposal \[PA4-20/i2021\]](#), which offers a sound basis for negotiations including key elements from proposal [\[PA4-09/i2021\]](#) but also the request of other Parties for improved management measures in order to avoid unwanted bycatch, to reduce total mortality of mako sharks by gear modifications including large circle hooks, to make progress on safe handling, and to increase observer coverage.

However, while Pro Wildlife supports [Commission Chair's proposal \[PA4_20/i2021\]](#) we would like to highlight the following:

1. A TAC of a maximum of 2001 t for the South Atlantic should be included in the Commission Chair's proposal, in line with the SCRS advice;
2. While a new stock assessment by the SCRS for shortfin makos is highly welcome and should be finalised until 2024, there is no reason to further delay a decision on the mako shark. Science is clear and an agreement on a full retention ban without exceptions, complemented by the proposed management measures, is overdue.

We therefore call on all ICCAT Parties to seek a decision on the mako shark at this Panel 4 meeting. The time is now to protect the mako!

**Statement from Sharkproject International and
International Pole & Line Foundation to Panel 4, Round 3**

The Intersessional Meeting must agree on an immediate retention ban for shortfin mako sharks if the Commission is to fulfil its commitment to rebuild this stock by 2070

Appreciating the commitment of all parties to rebuilt North Atlantic shortfin mako stock by 2070 and the Commission Chair's proposal as a basis for further discussion.

Supporting his intent "to avoid repeating the scenario faced last year" while effective conservation measures are long time overdue and must not be postponed again.

Alarmed that 2020 catch data show overfishing continues and landings by Spain and Portugal have even increased compared to 2019 catches, with no live release data reported by the EU.

Re-emphasizing that continuing to enable economic incentives from landing dead mako sharks prevents best efforts being applied to avoid bycatch and to minimise post release mortality.

Highlighting that SCRS scientific advice – for a retention ban in the North and a TAC in the South - has been clear since 2017, with growing support:

- PA4-09/i2021 is supported by Canada, Gabon, Sierra Leone, the United Kingdom, Senegal, Chinese Taipei, Guinea-Bissau, and The Gambia;
- Norway stated in its 2020 communication that only a retention ban provides a scientific basis for stock rebuilding by 2070;
- Multiple statements from observers at ICCAT, NGOs, retailers and seafood supply have been published in 2020 and 2021 explicitly supporting the SCRS advice;
- The EU's Scientific Review Group (SRG) issued a negative opinion in December 2020 for non-detriment findings (NDFs) for North Atlantic shortfin mako considering all mako catches in the North Atlantic to be detrimental to the stock;
- More than 40 Members of the European Parliament sent an open letter to EU Commissioner Sinkevičius in May 2021 supporting the retention ban;
- Recommendation No. 12 published in June 2021 by the EU Outermost Regions Advisory Council (CCRUP) on "Measures for the Protection and Conservation of the Shortfin Mako Sharks" urging for the introduction of an immediate retention ban;

Therefore, we are calling for all ICCAT Parties to finally agree on what is scientifically justified, long overdue, and essential to *reduce total mortality to a level of << 300t*, providing a scientifically sound probability for stock rebuilding in the North by 2070.

ICCAT must also apply a precautionary approach to prevent the South Atlantic stock facing a similar state in the near future.

We therefore urge to:

- Introduce an immediate retention ban for shortfin mako in the North Atlantic;
- In 2022 introduce a TAC of not more than 2001 t for shortfin mako in the South Atlantic;
- Commit to further research and implementation of improved live release and bycatch avoidance strategies;
- Introduce a comprehensive Electronic Monitoring System (EMS) and increase human observer coverage to at least 20%;
- Conduct new stock assessments for shortfin mako sharks in the North and the South Atlantic at the latest by 2024.

ICCAT 2021 Panel 4 Intersessional Joint Statement on Mako Sharks - Ecology Action Centre (EAC)

Ecology Action Centre - with support from Shark Advocates International (a project of The Ocean Foundation), Shark Trust, and PADI AWARE - appreciates this opportunity to express our views on protections for Atlantic shortfin makos.

We take this opportunity to register our alarm over the latest ICCAT catch data ("*Shortfin mako catches available in Task 1: North Atlantic stock*" [PA4-21/i2021]). In light of the increasingly urgent need to dramatically reduce fishing mortality in the North Atlantic, we note:

- Three of the top four mako fishing Parties: Spain, Portugal, and the US report an *increase* in landings from 2019 to 2020 while second ranked Morocco has failed to report for 2020.
- Despite the EU's focus on dead discards, the top two mako fishing EU Member States are not reporting the number of makos discarded dead (or alive).
- Spanish vessels exceeded a 2020 domestic TAC by more than 500 t.
- Portugal's landings have increased every year for the last seven years and jumped nearly 20% from 2019 to 2020.
- Canada: the only Party to implement the SCRS advice for North Atlantic makos domestically – reports a marked decrease in at-vessel mako mortality (64 t in 2019 v. 20 t in 2020) and a substantial increase in live release.

This serious and ongoing overexploitation of already depleted North Atlantic makos has been allowed to continue because ICCAT met the clear 2017 SCRS advice for a retention ban with a watered down and overly complex management compromise. Four years later, it is truly make or break for makos.

Half measures are clearly insufficient for such an inherently vulnerable species and the cost for falling short is increasingly high. We urge Parties to focus on the core of the scientific advice for this exceptionally imperiled population (a complete ban on retention) and recognize it as the essential first step to stem population decline and catalyze future progress toward mako avoidance and survival. Please strive to ensure a ban is included, without exception, as the centerpiece of the consensus proposal for the annual meeting, as proposed by at least eight Parties.

Any mention of tonnage should occur only in preambular text as part of the rationale for the prohibition and bycatch mitigation measures. Such levels should not exceed 300 t (for 60% probability of rebuilding by 2070) and should be defined clearly to include discards (in line with SCRS analyses). Including a "TAC" in any operative text risks creating a misimpression of fishing opportunities, leading to unconstructive negotiations that are likely to end in a dangerously inadequate measure.

We appreciate the focus on action for the North Atlantic yet stress the importance of establishing a ≤ 2002 t South Atlantic mako TAC (through a separate proposal, if necessary) to prevent a similar disaster for that population.

WWF Statement to Panel 4

The status of shortfin mako sharks in the Atlantic requires acting with no further delay. Reported catches in 2020 are significantly higher than the level recommended by the SCRS and inconsistent with the targets to recover the stock. WWF encourages CPCs to spare no effort in building a constructive and fruitful dialogue during the intersessional meeting of Panel 4 to reach consensus and progress towards the adoption of a comprehensive rebuilding plan to revert the declining trend of the North Atlantic stock of shortfin mako sharks.

The proposals submitted to date to Panel 4 include promising elements to build a comprehensive rebuilding plan aiming at gradually achieving a zero-retention policy, while at the same time introducing measures including improved data collection, area/time-based management, technical measures on fishing gears, safe handling and best practices for the release of live specimens and verification means, as crucial tools to mitigate bycatch, reduce mortality and increase post-release survival. It is essential that any conservation measure is supported by robust monitoring, effective control, surveillance and reliable reporting from CPCs. WWF believes that all these are crucial elements that cannot be left standing alone for an effective and comprehensive rebuilding plan.

Acknowledging all the difficulties related to the adoption of conservation measures in virtual meetings, especially for the Commission and its tight agenda, the three-day intersessional meeting of Panel 4 is an opportunity that cannot be missed to break the long inaction by ICCAT CPCs to agree on an ambitious plan and ensure a future for shortfin mako sharks in the Atlantic.

Statement by Shark Trust to the Panel 4 Intersessional meeting

Shark Trust - with support from The Ocean Foundation, Shark Advocates International (a project of The Ocean Foundation), Ecology Action Centre, Project AWARE, Humane Society International, Shark Project, and Defenders of Wildlife - appreciates this opportunity to express our views regarding our top priority for the 2021 ICCAT Panel 4 intersessional meeting: shortfin mako shark protection.

It has been four years since ICCAT scientists concluded that the North Atlantic shortfin mako population status was so dire that a complete retention ban was immediately necessary as a starting point to stem decline. It has also been four years since the SCRS recommended establishing a South Atlantic mako TAC and more than a decade since it warned managers about makos' inherent vulnerability to overfishing. ICCAT's repeated failure to heed this clear and comprehensive advice has allowed overfishing to continue and the outlook for this species to further deteriorate. We urge ICCAT to end the delays and secure a brighter future for this extraordinary species now.

With respect to the depleted North Atlantic shortfin mako population, we urge Parties to:

- **Prioritize and support the retention ban advised by the SCRS** noting that it:
 - Is based on TAC scenarios that incorporate all sources of mortality, *including dead discards*
 - Is deemed the *most effective* way to achieve the substantial reductions necessary
 - Takes into account the species' relatively high post-release survival.
- **Recall and recognize that retention bans:**
 - Are vital to remove incentives to encounter and kill valuable, threatened species
 - Were recommended for shark species of concern more ten years ago
 - Are the most common RFMO shark measure
 - Have been implemented by several ICCAT Parties for many shark species
 - Are less restrictive than closing fisheries.
- **Reject any exceptions that allow landings** because they:
 - Run counter to SCRS advice for a non-retention policy "*without exception*"
 - Create incentive for irresponsible fishing practices that maximize mortality
 - Further delay a multidecadal recovery.
- **Set a course for learning and doing more.** Complementary initiatives to minimize incidental mako mortality are also needed but cannot replace and must not delay the core fishing limits.

We applaud Canada, Senegal, Gabon, U.K, Sierra Leone and Chinese Taipei for presenting the only mako proposal that includes the vital core elements of the SCRS advice: a North Atlantic retention ban and a 2001t South Atlantic TAC. The former is urgently needed to prevent irreparable collapse; the latter can prevent another crisis.

It's make or break for makos. We urge Parties to support at the very least a North Atlantic ban and a South Atlantic TAC – as Canada and others have proposed - without further delay.