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Opinion on the Conformity of the European Union's Position with the UNFSA concerning the Conservation and Management of North Atlantic Shortfin Mako Shark at ICCAT

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Executive Summary

This legal opinion assesses a proposal presented by the European Union (EU) to Panel 4 of the International Commission for the Conservation of Atlantic Tunas (ICCAT) in October 2021 regarding the management of North Atlantic Shortfin Mako (NA-SMA) against the legal framework for the application of the precautionary approach under the UN Fish Stocks Agreement (UNFSA). Article 5(c) UNFSA requires States Parties to the UNFSA to adopt science-based conservation and management measures able to achieve long-term sustainability of highly migratory fish stocks such as the NA-SMA, and to "apply the precautionary approach in accordance with [Article 6 UNFSA]". Under Article 6(1) UNFSA, States Parties must "apply the precautionary approach widely to conservation, management and exploitation of […] highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment". As a State Party to the UNFSA, the EU would be in violation of Articles 5(c) and 6(1) UNFSA if the EU's conduct in the adoption of a conservation and management measure falls short of applying the precautionary approach.

From 2017, ICCAT's scientific body, the Standing Committee on Research and Statistics (SCRS) has warned ICCAT contracting parties (CPs) of a significant decline in the NA-SMA population, recommending a temporary retention ban to reverse such decline. Despite this, the EU and other CPs have opposed a NA-SMA retention ban during ICCAT negotiations. Since the SCRS's warning, ICCAT CPs have adopted two Recommendations, respectively in 2017 and 2019, that contained no retention limits. In October 2021, the EU presented a proposal that

would allow for NA-SMA that is dead upon haul to be retained at a rate that would be calculated depending on a number of variables.

The EU's October 2021 proposal involves an extremely long, and therefore uncertain, restoration period until 2070 as well as further uncertainties concerning the envisaged probability of restoration, the method of calculation of potential retention, and the adequacy of the underlying data – in particular with respect to total mortality (including dead and live discards). These uncertainties undermine the ability of the proposal to meet the obligation to apply the precautionary approach under the UNFSA without additional safeguards. Best available scientific information (the latest SCRS projections) shows that the NA-SMA stock will continue to decline until 2035 before any biomass increases can occur even with zero retention, and that zero retention will allow the stock to rebuild and without overfishing by 2045 with a 53% probability.

Against this background, in the present authors' view, a precautionary approach in line with the UNFSA would require a temporary retention ban *at least* until 2035, preferably until 2045. Such a measure would account for many of the current uncertainties and increase the chances for successful implementation and rebuilding of the NA-SMA stock in accordance with the best available scientific information. If there is no consensus on such a precautionary Recommendation at the 27th Regular Meeting of ICCAT from 15 to 23 November 2021, and if ICCAT instead adopts a Recommendation that replicates the measures currently set out in Recommendation 19-06, the ICCAT CPs would in the authors' opinion fail to meet the precautionary standards of the UNFSA. To account for this possibility, this opinion sets out the procedure for CPs willing to support a precautionary Recommendation to invoke ICCAT's voting procedure in the event that no consensus to adopt such a Recommendation is reached at this meeting. Failing a positive outcome of such a vote, the submission of the matter to binding dispute settlement under Part VIII of the UNFSA constitutes an additional avenue that CPs could consider.

I. Introduction

The shortfin mako (*Isurus oxyrinchus*) is a shark species that is routinely captured by industrial pelagic longline vessels across the Atlantic Ocean. It belongs to the family *Lamnidae*, which is listed as a highly migratory species in Para. 16 of Annex I of the 1982 United Nations

Convention on the Law of the Sea (UNCLOS)[1] under the name *Isuridae*.[2] As such, it falls within the scope of the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA).[3] North Atlantic shortfin mako (NA-SMA) is predominantly captured by vessels flagged by European Union (EU) Member States (followed by Morocco and the United States of America (US)) alongside other commercially important species such as blue shark (*Prionace glauca*) and swordfish (*Xiphias gladius*). In addition, other fishing nations catch NA-SMA in their fisheries but do not always retain it.[4]

The NA-SMA fishery falls within the mandate of the International Commission for the Conservation of Atlantic Tunas (Commission or ICCAT), a regional fisheries management organisation (RFMO) created in 1966 through the International Convention for the Conservation of Atlantic Tunas (ICCAT Convention).[5] Concluded long before UNCLOS and the UNFSA, the objective of the ICCAT Convention is to ensure co-operation in maintaining the populations of tuna and tuna-like fishes of mutual interest found in the Atlantic Ocean at levels which will permit "the maximum sustainable catch for food and other purposes".[6] The term "tuna-like fishes" in this context includes SMA, which falls under "other species of fishes exploited in tuna fishing in the Convention area as are not under investigation by another international fishery organization".[7] ICCAT adopts Recommendations in respect of the measures necessary to attain stock management objectives, which are legally binding on Contracting Parties (CPs).[8] The EU has been a CP to ICCAT since 1997.[9]

ICCAT is integrated by a series of Panels that engage and collate scientific information and are responsible for the substantive elaboration of Recommendations.[10] Proposals for Recommendations are made on "the basis of scientific investigations",[11] informed by ICCAT's Standing Committee on Research and Statistics (SCRS), which establishes the scientific and

[1] *United Nations Convention on the Law of the Sea* (10 December 1982) 1833 *UNTS* 3.
[2] See Daniel Owen, 'Annex I', in Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea (UNCLOS): A Commentary* (Munich/Oxford/Baden-Baden: C.H. Beck/Hart/Nomos, 2017), para. 43.
[3] See Article 3(1) of the *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (4 December 1995) 2167 *UNTS* 3.
[4] See ICCAT Statistics (2021), https://meetings.iccat.int/index.php/s/BsbDknaXlo8EbsK?path=%2FJuly_meeting%2FStatistics.
[5] *International Convention for the Conservation of Atlantic Tunas* (14 May 1966) 673 *UNTS* 63.
[6] See Preamble of the ICCAT Convention.
[7] Article IV(1) ICCAT Convention.
[8] Article VIII ICCAT Convention.
[9] ICCAT, Contracting Parties 2021, https://www.iccat.int/en/contracting.html#.
[10] See Articles VI and VIII(1)(b)(ii) ICCAT Convention.
[11] Article VI ICCAT Convention.

statistical bases for the development of policies and procedures.[12] The NA-SMA fishery is under the oversight of Panel 4, of which the EU is a member alongside the US, Morocco, and other CPs.[13]

As explained further in section II. below, from 2017 onwards the SCRS reported to Panel 4 a series of stock assessment findings indicating that a significant decline in the NA-SMA population was taking place, and that stringent management measures and a temporary retention ban were required to halt and reverse such decline. The Recommendations that were subsequently proposed by Panel 4 and adopted by ICCAT in 2017 and 2019 did not, however, reflect the conclusions of the SCRS. Over the course of the past few years, the EU has opposed a NA-SMA retention ban and in October 2020 tabled a proposal involving a total allowable catch (TAC) that would allow for significant continued retention of caught NA-SMA specimens that are already dead (2020 EU proposal).[14] In October 2021, it then presented a proposal that would allow for continued retention of dead NA-SMA once a still to be defined mortality goal has been reached (October 2021 EU proposal).[15]

Against this background, the present authors have been asked to provide a legal opinion on the conformity of the EU's position concerning the NA-SMA at ICCAT with the obligation under the UNFSA to apply a precautionary approach to the conservation and management of highly migratory fish stocks.[16] The limited substantive scope of this opinion by no means suggests that the EU's position is necessarily in conformity with other relevant legal instruments, such as UNCLOS or the legal framework of the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[17] or indeed other obligations under the UNFSA.[18]

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[12] ICCAT, Standing Committee on Research and Statistics (SCRS), https://www.iccat.int/en/scrs.html.
[13] ICCAT, Commission Structure, https://www.iccat.int/en/organization.html.
[14] Draft Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries (Proposal Submitted by the European Union), 16 October 2020, Doc. No. PA4-804/2020, https://www.iccat.int/com2020/ENG/PA4_804_ENG.pdf.
[15] Draft Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries, Doc. No. PA4_03A_i 2021, https://meetings.iccat.int/index.php/s/BsbDknaXlo8EbsK/download?path=%2FOctober_meeting%2FENG&files=PA4_03A_OCT_ENG_EU_Proposal.docx.
[16] Articles 5(c) and 6 UNFSA. See generally David Freestone, 'International Fisheries Law since Rio: The Continued Rise of the Precautionary Principle', in Alan E. Boyle and David Freestone (eds.), *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford: Oxford University Press, 1999), 135–164; David Freestone, 'Implementing Precaution Cautiously: The Precautionary Approach in the Straddling and Highly Migratory Fish Stocks Agreement', in Ellen Hey (ed.), *Developments in International Fisheries Law* (The Hague: Kluwer Law International, 1999), 287–325; Simon Marr, *The Precautionary Principle in the Law of the Sea: Modern Decision Making in International Law* (Leiden: Martinus Nijhoff, 2003).
[17] *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (3 March 1973) *UNTS* 243.
[18] For a broader legal analysis, see Mercedes Rosello, Juan Vilata and Dyhia Belhabib, 'Atlantic Shortfin Mako: Chronicle of a Death Foretold?' (2021) 10(52) *Laws*, https://doi.org/10.3390/laws1003005.

Moreover, the opinion's focus on the EU should not be interpreted as detracting from the responsibility of other ICCAT CPs such as the US and Morocco.

This legal opinion is structured as follows: It first provides an overview of how the management of the NA-SMA was addressed in the framework of ICCAT between 2017 and 2021, setting out the views of the SCRS, the EU, and where appropriate other CPs and actors, with regard to the conservation and management of the NA-SMA (II.). This is followed by an overview of the legal framework for the purposes of the application of the precautionary approach under the UNFSA (III.). Thereafter, the opinion assesses the EU's current position on the NA-SMA against the specified legal requirements (IV.). Finally, it provides conclusions and shows potential ways forward in case there is no consensus at ICCAT to adopt a sufficiently precautionary Recommendation for NA-SMA (V.).

II. Background

In 2017, the SCRS reported a concerning decline in the NA-SMA population based on the findings of several scientific assessments.[19] These findings indicated that the stock was not only below maximum sustainable yield (MSY) and experiencing overfishing already at the time, but also that stock recovery would not occur without the introduction of stringent catch limits due to ongoing removal of juveniles from the stock biomass as a result of fishing pressure.[20] The 2017 SCRS report considered various possible approaches to prevent further overfishing and support the recovery of the stock, ultimately concluding that "only a 0 t annual catch will rebuild the stock with a 54% probability" by 2040.[21] Taking into account that even a complete prohibition of retention would not reduce mortality of the stock to zero, the SCRS also recommended additional measures to reduce such incidental mortality, such as time/area closures, gear restrictions, and safe handling and best practices for the release of live specimens.[22]

Despite these concerns, ICCAT adopted Recommendation 17-08, which did not contain a TAC but other measures "to prevent the population from decreasing further, stop overfishing and begin to rebuild the stock".[23] These measures include an obligation to promptly release NA-

[19] Report of the Standing Committee on Research and Statistics, 2 to 6 October 2017, https://www.iccat.int/Documents/Meetings/Docs/2017_SCRS_REP_ENG.pdf, p. 218 (SCRS 2017).
[20] *Ibid.*
[21] *Ibid.*, p. 220.
[22] *Ibid.*
[23] Recommendation 17-08 by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries, https://www.iccat.int/Documents/Recs/compendiopdf-e/2017-08-e.pdf (ICCAT 17-08).

SMA except in certain cases. Such exceptions, in respect of which CPs can authorise the retention, transhipment and landing of NA-SMA, include NA-SMA that are dead when brought alongside for taking on board the vessel; NA-SMA that are either dead or alive in cases where the CP's domestic law authorises the capture and retention; transhipment or landing of specimens with a "minimum size of at least 180 cm fork length for males and of at least 210 cm fork length for females"; and in cases where "the retention of shortfin mako does not exceed the fishing vessel's average shortfin mako landings while an observer is on board and this is verified by mandatory logbooks and landing inspection conducted on the basis of risk assessment".[24] In this Recommendation, it is also indicated that the post-release survivability of the NA-SMA is believed to be in the region of 70%.[25]

In 2019, the decline of the NA-SMA had become the focus of discussion in several international conservation fora other than ICCAT. The International Union for the Conservation of Nature (IUCN), which had previously listed the NA-SMA as "vulnerable" in its Red List of threatened species, updated its assessment of the species to "endangered".[26] The same year, the Conference of the Parties of CITES included the SMA globally in Appendix II of CITES,[27] on the basis of a listing proposal that had been submitted by a group of twenty-eight Parties to CITES, including the EU.[28] It should be noted that, in supplementary information to the proposal, significant criticism was levelled at ICCAT's CPs for failing to prevent the collapse of the stock.[29]

Over the course of 2019, the SCRS concluded that the projections made in 2017 might not have reflected the full range of uncertainty in the outlook, as more adequate models for the projection of NA-SMA had not yet been available in 2017. The latest projections resulting from the combined models showed that:[30]

> "i) a zero TAC will allow the stock to be rebuilt and without overfishing (in the green quadrant of the Kobe plot) by 2045 with a 53% probability;

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[24] *Ibid.*, p. 1.
[25] *Ibid.*
[26] IUCN Red List of Threatened Species, Shortfin Mako (2019), https://dx.doi.org/10.2305/IUCN.UK.2019-1.RLTS.T39341A2903170.en (IUCN Red List of Threatened Species 2019).
[27] CITES, Appendices I, II and III (2021), https://cites.org/sites/default/files/eng/app/2021/E-Appendices-2021-06-22.pdf, p. 52.
[28] See CITES, Consideration of Proposals for Amendment of Appendices I and II, CoP18 Prop. 42, https://cites.org/sites/default/files/eng/cop/18/prop/060319/E-CoP18-Prop-42.pdf.
[29] CITES, Supplementary Information on CITES COP 18 Proposal 42, https://cites.org/sites/default/files/eng/cop/18/inf/E-CoP18-Inf-040.pdf, pp. 2-3.
[30] Report of the Standing Committee on Research and Statistics, 30 September to 4 October 2019, https://www.iccat.int/Documents/Meetings/Docs/2019/REPORTS/2019_SCRS_ENG.pdf, pp. 227 and 231 (SCRS 2019).

> ii) regardless of the TAC (including a TAC of 0 t), the stock will continue to decline until 2035 before any biomass increases can occur;
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> iii) a TAC of 500 t, including dead discards has only a 52% probability of rebuilding the stock to the green quadrant in 2070;
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> iv) to be in the green quadrant of the Kobe plot with at least 60% probability by 2070, the realized TAC has to be 300 t or less;
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> v) lower TACs achieve rebuilding in shorter time frames; and
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> vi) a TAC of 700 t would end overfishing immediately with a 57% probability, but this TAC would only have a 41% probability of rebuilding the stock by 2070."

The SCRS qualified these projections with the caveat that they were subject to considerable scientific uncertainty due to the characteristics of the fishery, NA-SMA biology, and to the length of the estimates, some of which extended to 2070.[31] In particular, projections showed that because of the specific biology of NA-SMA, there will be a long "lag time" (approximately 20 years) between the implementation of management measures and when stock size starts to rebuild.[32] The SCRS also highlighted the insufficient level of catch and effort data being submitted by CPs to the ICCAT Secretariat, and the difficulties this entailed for management. In particular, the SCRS highlighted that:

> "… reporting all sources of mortality is an essential element to decrease the uncertainty in stock assessment results, and particularly the report of estimated dead discards for all fisheries. Although the reporting of dead discards is already part of the ICCAT data reporting obligations (Rec. 17-08), the requirement has been ignored by many CPCs. The reporting of dead discards and live releases is of the utmost importance".[33]

Due to the NA-SMA's high biological vulnerability and these pessimistic projections, the SCRS recommended the adoption of a retention ban – without exceptions – to accelerate the rate of recovery and to increase the probability of success.[34]

In response, the EU submitted a proposal for a draft Recommendation to Panel 4, dated November 2019. [35] In this proposal, the EU acknowledged that the updated projections of the SCRS highlight that the NA-SMA stock will continue to decrease up to 2035 irrespective of any management measures taken. It also considered that a zero TAC "should allow rebuilding

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[31] *Ibid.*
[32] *Ibid.*, p. 228.
[33] *Ibid.*, pp. 230.
[34] *Ibid.*.
[35] Draft Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako caught in association with ICCAT Fisheries (Proposal submitted by the EU), 17 November 2019, Doc. No. PA4_811/2019, https://www.iccat.int/com2019/ENG/PA4_811_ENG.pdf.

of the stock above the target biomass and without overfishing, by 2050 with a 60% probability", and that "[a]ny constant annual catch level equal to or below 500 t will immediately halt overfishing while allowing the recovery of the stock by 2070 with a probability higher than 50%".[36] Importantly, whereas the SCRS's recommendations refer to *total* mortality, the TACs proposed by the EU in this proposal refer to *retained* quantities and does not take into account total mortality.

An opposing draft Recommendation was submitted by Senegal, Gambia and Canada, and endorsed by other CPs, which proposed a total retention ban, allowing only the exception for CPs whose domestic law requires that any dead fish be landed, without any commercial profit.[37] Objections to this proposal and another competing draft Recommendation with a heavily qualified "prohibition" to retain NA-SMA were submitted by the US.[38] Proceedings ultimately resulted in the adoption of Recommendation 19-06.[39] Like its 2017 predecessor, this Recommendation neither reflects the concerns and concluding recommendations of the SCRS, nor the concerns expressed in other international fora where measures have been adopted in light of the decline of the NA-SMA stock.

Panel 4 experienced considerable activity in the 2020 intersessional period, with many written statements being submitted by CPs and observers.[40] There were three Panel 4 proposals concerning NA-SMA.[41] The US again put forward its 2019 proposal in which it significantly deviated from the total retention ban recommended by the SCRS. [42] The EU put forward a proposal that similarly deviated from the SCRS recommendations, including an annual TAC of 500 t for caught NA-SMA that are dead, namely the 2020 EU proposal.[43] There was also a new proposal for a Recommendation by Senegal and Canada that contained a complete retention

[36] *Ibid.*, p. 1.
[37] Draft Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako caught in association with ICCAT Fisheries (Proposal submitted by Senegal, the Gambia, and Canada), 18 November 2019, Doc. No. PA4_805A/ 2019, https://www.iccat.int/com2019/ENG/PA4_805A_ENG.pdf.
[38] Explanatory Note for a Draft Recommendation by ICCAT to establish a Rebuilding Program for North Atlantic Shortfin Mako Sharks caught in association with ICCAT Fisheries (Submitted by the United States), 12 November 2019, Doc. No. Pa4-814/2019, https://www.iccat.int/com2019/ENG/PA4_814_ENG.pdf.
[39] Recommendation 19-06 by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako caught in association with ICCAT Fisheries, https://www.iccat.int/Documents/Recs/compendiopdf-e/2019-06-e.pdf.
[40] ICCAT, 2020 Commission Documents, https://www.iccat.int/com2020/index.htm#en.
[41] ICCAT, Summary Report by the Commission Chair (2020) Doc. No. PLE_150_A/2020, p. 4.
[42] Draft Recommendation by ICCAT to establish a Rebuilding Program for North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries (a new proposal, previously discussed but not adopted as PA4-814/2019) (Proposal by the United States), 16 October 2020, Doc. No. PA4_805/2020, https://www.iccat.int/com2020/ENG/PA4_805_ENG.pdf.
[43] Doc. No. PA4-804/2020, *supra* note 14.

ban and was endorsed by several other CPs.[44] Significantly, Morocco criticised the zero catch proposal, arguing that it would not reduce mortality levels.[45] Alongside the US and Morocco, the EU maintained a critical view of the SCRS's concluding recommendations, questioning the effectiveness of a retention ban, stating that:

> "a full retention ban […] might give the perception that strong action had been taken but the reality would be very different since it would not lead to less mortality, except on paper, as dead fish would merely be returned to the sea, and the problem hidden."[46]

Notably, in 2017, the SCRS had already recommended adopting management measures in addition to a complete prohibition of retention, not as an alternative pathway to stop overfishing and rebuild the stock, but in order to reduce additional incidental mortality.[47] A number of NGO observers at Panel 4 further indicated that the SCRS had already taken dead discards into consideration in their recommendation of a retention ban.[48] NGOs also highlighted that the current practice of being allowed to retain and commercialise dead fish incentivises fishers to have dead sharks hauled to the boat instead of applying fishing practices and procedures that could increase the chance of survival and live releases, and in particular, that:

> "Allowing valuable makos to be landed if they are dead creates an incentive to ensure that they arrive at the boat dead, which can be achieved through irresponsible fishing practices that unnecessarily increase mortality."[49]

However, no consensus could be found on any specific proposal, neither at the 2020 meeting nor in subsequent correspondence, [50] and the discussions were postponed by a further year. In December 2020, the EU therefore adopted a unilateral catch limit of 288 t NA-SMA (for fish dead at haul-back and caught in the presence of an observer on-board), corresponding to the proportion of the catches it would have expected under a 500 t TAC at the ICCAT level.

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[44] Draft Recommendation by ICCAT on the Conservation of North Atlantic Stock of Shortfin Mako caught in association with ICCAT Fisheries, https://www.iccat.int/com2020/ENG/PA4_806_ENG_SPONS_1.pdf.
[45] Statement by Morocco regarding the Draft Recommendations on Shortfin Mako, https://www.iccat.int/com2020/ENG/PA4_817_ENG.pdf.
[46] Statement by the European Union on Panel 4 – Round 2 (2020) Doc. No. PA4-829/2020, https://www.iccat.int/com2020/ENG/PA4_829_ENG.pdf.
[47] SCRS 2017, *supra* note 19, p. 220.
[48] Statement by the Ecology Action Centre (2021), https://www.iccat.int/com2020/ENG/PA4_810_Ecology_Action_Centre_Statement.pdf, p. 1 (Ecology Action 2021).
[49] *Ibid.*
[50] Additional Clarifications from PA4 Chair on Way Forward, https://www.iccat.int/com2020/ENG/PA4_822_ENG.pdf.

The issue was again discussed at the July 2021 Intersessional Meeting of Panel 4 with similar proposals under consideration. Canada and co-sponsoring CPs again proposed a retention ban, whereas the US again put forward its previous proposal deviating from a retention ban.[51] The timing meant that the EU had not at this time conducted the required level of consultations with its Member States and stakeholders, which were to be completed by the third quarter of 2021. It therefore put forward a draft proposal – without prejudice to its final position – which focused 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", hoping that agreement on such measures "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" (May 2021 EU proposal).[52] The May 2021 EU proposal therefore proposed various management measures, such as the release of all sharks landed alive, accounting for all mortalities, safe handling, enhanced monitoring, and the use of data loggers.

The July 2021 meeting again did not lead to consensus, and a second Intersessional Meeting was scheduled for 27 October 2021. The Chair of Panel 4 then put forward a consolidated draft proposal, reflecting areas of commonality indicated by CPs (Chair's proposal).[53] Using the Chair's proposal as its basis and revising some of its elements, the EU then submitted a new proposal just ahead of this meeting; the October 2021 EU proposal.[54] It is this 2021 EU proposal with which this legal opinion is concerned in particular. As explained in more detail below (section IV.), the October 2021 EU proposal could represent a step forward from the October 2020 EU proposal with its proposed 500 t TAC to retain dead NA-SMA, but presents its own challenges in terms of precautionary management, both with respect to legal clarity and

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[51] ICCAT, Report of the Intersessional Meeting of Panel 4 (2021), Doc. No. PA4_804/2021, p. 2 https://meetings.iccat.int/index.php/s/BsbDknaXlo8EbsK?path=%2FJuly_meeting%2FDocs_ENG (P4 Report 2021); Draft Recommendation by ICCAT to establish a Rebuilding Program for North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries (New proposal, submitted by Canada, Gabon, Sierra Leone, and the United Kingdom, previously presented as PA4-806/2020), 17 May 2021, Doc. No. PA4_09/i 2021; Draft Recommendation by ICCAT to establish a Rebuilding Program for North Atlantic Stock of Shortfin Mako Caught in Association with ICCAT Fisheries (a new proposal by the United States, previously presented as PA4-805/2020), 10 May 2021, Doc. No. PA4_07/i 2021.

[52] 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), 14 May 2021, Doc. No. PA4_08/i 2021, https://meetings.iccat.int/index.php/s/BsbDknaXlo8EbsK/download?path=%2FJuly_meeting%2FDocs_ENG&files=PA4_08_ENG_EU_Draft_Proposal.docx.

[53] Doc. No. PA4_20-ENG_Chair_Proposal_rev_2, https://meetings.iccat.int/index.php/s/BsbDknaXlo8EbsK/download?path=%2FJuly_meeting%2FDocs_ENG&files=PA4_20_ENG_Chair_Proposal_rev_2.docx.

[54] Doc. No. PA4_03_OCT_REV/i 2021, *supra* note 15.

implementation.

As set out in the accompanying explanatory note, the October 2021 EU proposal contains what it believes is "an ambitious and workable way forward". It presupposes that there is now consensus among ICCAT CPs that there is a need to immediately stop overfishing and that the timeline for the recovery period is the year 2070. The proposal brackets for now the probability ratio for rebuilding the stock to MSY by 2070 to 60-70%, as proposed by other CPs, which has not yet been agreed. It also proposes to include the preambular text that "the updated projections conducted by the SCRS in 2019 outline several scenarios, including the scenario where a certain degree of retention would still allow the recovery of the stock by 2070". The question of the desired probability ratio is an important issue that remains to be decided by the CPs. Provided that the 60-70% probability ratio established in brackets is adopted, this would place the draft proposal on a par with or above other ratios adopted by ICCAT and other CPs. ICCAT practice as reported to Panel 4 indicates that ICCAT stock rebuilding programmes for other species are based on a 50-60% ratio.[55] Several of the 2021 communications have revolved around the probability ratios in which the different views on NA-SMA management are rooted. In this regard, the July 2021 Intersessional Meeting Report indicates the following:

> "…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."[56]

The shared position of several NGOs on the probability ratios is that the example set by the US for its domestic shark fisheries, in which decisions are based on a 70% probability of reaching targets, should be followed for pelagic sharks in the Atlantic when rebuilding stocks.[57]

Despite the SCRS recommendation for a complete retention ban, the October 2021 EU proposal implies that retention can be allowed depending on whether or not an agreed fishing mortality goal is reached. The proposal formulates two methodologies to this effect. First, a methodology for how the mortality goal should be determined; and second, a methodology for how the retention level should be calculated in light of this mortality goal.

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[55] Report of the Intersessional Meeting of Panel 4 (Virtual Zoom meeting, 6-8 July 2021), https://www.iccat.int/Documents/Meetings/Docs/2021/REPORTS/2021_PA4_ENG.pdf, p. 4.
[56] *Ibid.*
[57] Ecology Action 2021, *supra* note 48, p. 1.

The methodology for determining the mortality goal is set out in para. 2bis(a) of the October 2021 EU proposal, as follows: "The fishing mortality goal consistent with this plan shall be based on para 1 and the most recent Kobe II risk matrix for North Atlantic shortfin mako projection results (…)", whereby para. 1 sets out that the goal of the programme's objectives is "to end overfishing immediately and gradually achieve biomass levels sufficient to support [MSY] by 2070 with a probability of at least [60/70%]." The "mortality goal" thus depends on two variables: the Kobe II risk matrix projection results, and the probability ratio for rebuilding the stock by 2070, currently set at 60-70%.

The proposal moreover sets out the methodology for calculating the retention level in para. 2(b)(b). Namely, any allowable retention is to be calculated by subtracting "the mortalities other than retention" from the mortality goal, whereby "the mortalities other than retention" are to be "estimated by the SCRS based on the data submitted by CPCs as well as [updated] scientific evidence." If this calculation yields a number greater than zero, then this threshold value is the amount that can be retained (paras. 2bis(c)-(d)). The SCRS is to establish the level of possible retention following every stock assessment (para. 2bis(e)). The proposal furthermore foresees a further para. 2quater in which the fishing mortality goal for NA-SMA would be set out in tonnes for the year, and in which catch distribution (CPC total permissible retention) would be calculated using the threshold value times the average of annual CPC catches over the period 2013-2017 divided by the average total of ICCAT catches for that same period.

The potential for retention thus depends not only on the first methodology to define a scientifically based "mortality goal", but also, on the ability of the SCRS to estimate "mortalities other than retention" – which in turn depends on the extent and the validity of the data submitted by the CPs, and scientific evidence. In other words, the amount of NA-SMA that may be retained under the October 2021 EU proposal depends on several variables: sound scientific evidence, excellent data reporting by CPs, the accuracy of the Kobe II risk matrix projection results, and the probability ratio for rebuilding the stock by 2070, which in accordance with the current proposal is expected to be set at 60-70%. It is clear that the proposal's aim is to leave in place the possibility for a limited degree of retention "*once* mortality levels have descended below an agreed level" (emphasis added). As discussed further in section IV., the complexity of these proposed calculations, the uncertainties and room for error inherent to some of these variables, and the time period chosen for distributing any

retention among CPs, are problematic from the point of view of ensuring precautionary management.

Further to the above, it is noted that at the time of writing, discussions are ongoing and the information presented in this overview are therefore subject to change, depending on how the events at Panel 4 continue to unfold.

III. Precautionary Fisheries Management under the UNFSA

The objective of the UNFSA is "to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions of [UNCLOS]".[58] With respect to highly migratory fish stocks listed on Annex I of UNCLOS (including the NA-SMA),[59] Article 64 UNCLOS contains an obligation of States Parties to "cooperate directly or through appropriate international organizations with the view to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region".[60] Insofar as States fish for these stocks on the high seas, Articles 117 and 118 UNCLOS provide for additional obligations to cooperate either directly or through RFMOs.[61] The UNFSA "implements" these obligations to cooperate by establishing a set of more detailed rights and obligations for UNFSA States Parties to conserve and manage straddling and highly migratory fish stocks, associated and dependent species as well as to protect marine biodiversity and the marine environment from the negative impacts caused by fishing.[62] Moreover, it sets out mechanisms for international cooperation and identifies RFMOs as the primary means through which States can fulfil their obligations to manage and conserve straddling and highly migratory fish stocks.[63]

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[58] Article 2 UNFSA. For discussion of the basic functioning of the UNFSA, see further David A. Balton, 'Strengthening the Law of the Sea: The New Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks' (1995) 27 *Ocean Development & International Law* 125–151; Will Martin, 'Fisheries Conservation and Management of Straddling Stocks and Highly Migratory Stocks under the United Nations Convention on the Law of the Sea' (1995) 7 *Georgetown International Environmental Law Review* 765–770; André Tahindro, 'Conservation and Management of Transboundary Fish Stocks: Comments in Light of the Adoption of the 1995 Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks' (1997) 28 *Ocean Development & International Law* 1–58; Rosemary Rayfuse, 'The United Nations Agreement on Straddling and Highly Migratory Fish Stocks as an Objective Regime: A Case of Wishful Thinking' (1999) 20 *Australian Year Book of International Law* 253–278; Moritaka Hayashi, 'The Straddling and Highly Migratory Fish Stocks Agreement', in Hey (ed.), *supra* note 16, 55–83; Satya N. Nandan and Michael Lodge, 'Some Suggestions Towards Better Implementation of the United Nations Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks of 1995' (2005) 20 *The International Journal of Marine and Coastal Law* 345–379.
[59] Cf. James Harrison and Elisa Morgera, 'Article 64', in Proelss (ed.), *supra* note 2, para. 13.
[60] See further *ibid.*, paras. 1-12.
[61] For details, see Rosemary Rayfuse, 'Article 116', 'Article 119', in Proelss (ed.), *supra* note 2, para. 13.
[62] Articles 5 *et seq.* UNFSA.
[63] Articles 8 *et seq.* UNFSA.

As ICCAT is an RFMO mandated with the conservation and management of highly migratory fish stocks in the Atlantic Ocean, the CPs of ICCAT that are also States Parties to the UNFSA (such as the EU)[64] must, in conserving and managing the NA-SMA through ICCAT, adopt conservation and management measures (CMMs) that are consistent with the UNFSA.[65]

While the UNFSA imposes a different burden on its States Parties in relation to the conservation and management of "target stocks" and "non-target species",[66] it does not provide definitions of these terms that would allow for a clear distinction.[67] Although it is outside the scope of the present opinion to provide a conclusive view on the scope of these terms, a brief clarification is necessary to assess whether the NA-SMA should be classified as a "target stock" or "non-target species". In policy and management literature, the designation of a species as "bycatch", "non-target", or other similar categories is heterogeneous and based on different management and operational considerations.[68] For example, the ICCAT glossary refers to "bycatch" in very broad terms that would include in its remit such species caught in mixed fisheries that are formally designated to other species, such as the NA-SMA.[69] However, from a legal perspective, the classification of a species as "target" or "non-target" within the meaning of the UNFSA must be made on an objective basis, taking into account whether a species is subject to management as a "harvested species" within the meaning of Article 119(1)(a) UNCLOS. In other words, RFMOs do not have the power to subjectively determine that a species is a non-target species if its harvest is already subject to management by the RFMO.

The economic value of NA-SMA alongside other economically important species caught in the relevant multi-species fisheries – such as swordfish (*Xiphias gladius*) and blue shark (*Prionace glauca*) – indicates that NA-SMA constitutes a target stock (albeit secondary).[70] The fact that the NA-SMA is currently managed with species-specific CMMs through ICCAT Panel 4 is a further indicator of this status. Moreover, the conservation and restoration objectives currently undertaken by ICCAT for managed species imply the application of MSY objectives and the

[64] For a list of States Parties to the UNFSA, see https://www.un.org/depts/los/convention_agreements/convention_overview_fish_stocks.htm.
[65] Cf. Articles 8 to 10 UNFSA.
[66] Cf. Article 5(f) UNFSA.
[67] For detailed discussion, see Karen N. Scott, 'Bycatch Mitigation and the Protection of Associated Species', in Richard Caddell and Erik J. Molenaar (eds.), *Strengthening International Fisheries Law in an Era of Changing Oceans* (Oxford: Hart Publishing, 2019), 165–187.
[68] See COFI, International Guidelines on Bycatch Management and Reduction of Discards (2011), https://www.fao.org/in-action/globefish/publications/details-publication/en/c/346092/. For purposes of comparison, see also R.W.D. Davies, S.J. Cripps, A. Nickson, G. Porter, 'Defining and estimating global marine fisheries bycatch' (2009) 33(4) *Marine Policy* 661-672, 661.
[69] ICCAT, Glossary of Fishery Terms (2021), https://www.iccat.int/Documents/SCRS/Other/glossary.pdf.
[70] P4 Report 2021, *supra* note 51, p. 24 for 2019 and 2020.

precautionary approach in accordance with the standards established in the applicable international instruments, including the UNFSA.[71]

Furthermore, it should be noted that, in 2019, ICCAT CPs proposed to amend the ICCAT Convention in a way that would result in the addition of SMA and other sharks to the species already designated as being of interest to ICCAT CPs.[72] The proposed new preamble reads as follows:

> The Governments whose duly authorized representatives have subscribed hereto, considering their mutual interest in the populations of tuna and tuna-like fishes and elasmobranchs that are oceanic, pelagic, and highly migratory found in the Atlantic Ocean, and desiring to co-operate in maintaining the populations of these fishes at levels that will permit their long term conservation and sustainable use for food and other purposes, resolve to conclude a Convention for the conservation of these resources, and to that end agree as follows.

The EU Parliament supported this proposed amendment in 2020 following on a Recommendation of its Committee on Fisheries (PECH Committee).[73] As one of the key reasons for its Recommendation, the PECH Committee stated that the amendments would "substantially improve ICCAT's ability to manage *targeted* shark fisheries" (emphasis added).[74] The text supports the view that the NA-SMA is *de facto* a targeted species. Overall, the NA-SMA is most convincingly classified as a target stock within the meaning of the UNFSA.

The following sections describe the obligation to apply the precautionary approach to the conservation and management of highly migratory fish stocks under the UNFSA (1.), within the framework of ICCAT (2.), and (for purposes of context) under EU fisheries law (3.).

1. The Precautionary Approach under the UNFSA

[71] Articles 5(b) and 6 UNFSA. See further Resolution 15-12 by ICCAT concerning the Use of a Precautionary Approach in Implementing ICCAT Conservation and Management Measures, 2015, https://www.iccat.int/Documents/Recs/compendiopdf-e/2015-12-e.pdf (ICCAT 15-12).

[72] See the amended Article V(1)(a) ICCAT Convention as envisaged by Article 4 of the Protocol to amend the International Convention for the Conservation of Atlantic Tunas (2019, not yet in force), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22019A1204(01)&from=ES.

[73] European Parliament legislative resolution of 13 May 2020 on the draft Council decision on the conclusion, on behalf of the European Union, of the Protocol to amend the International Convention for the Conservation of Atlantic Tunas (13447/2019 – C9- 0187/2019 – 2019/0225(NLE)), https://www.europarl.europa.eu/doceo/document/TA-9-2020-0063_EN.pdf.

[74] Recommendation on the draft Council decision on the conclusion, on behalf of the European Union, of the Protocol to amend the International Convention for the Conservation of Atlantic Tunas (13447/2019 – C9-0187/2019 – 2019/0225(NLE)), https://www.europarl.europa.eu/doceo/document/A-9-2020-0089_EN.html.

Under Article 5(c) UNFSA, in adopting science-based CMMs that are able to achieve long-term sustainability of highly migratory fish stocks, States Parties are obliged to "apply the precautionary approach in accordance with [Article 6 UNFSA]".[75] Under Article 6(1) UNFSA, States Parties must "apply the precautionary approach widely to conservation, management and exploitation of […] highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment". Importantly, both provisions are framed as obligations rather than "principles" regardless of the status of the precautionary approach under international law more generally. As such, States Parties would be in violation of Articles 5(c) and 6(1) UNFSA if their conduct – such as the adoption (or not) of a CMM or its implementation – falls short of applying the precautionary approach.

This general obligation is further concretised in Article 6(2) UNFSA, pursuant to which States Parties must "be more cautious when information is uncertain, unreliable or inadequate" and must not use the "absence of adequate scientific information […] as a reason for postponing or failing to take [CMMs]". While this wording only explicitly includes a failure to adopt CMMs, Article 6(2) UNFSA also prohibits reliance on the absence of adequate scientific information as a reason to take ineffective or insufficient CMMs.

Article 6(3) UNFSA contains minimum standards for what implementation of the precautionary approach must entail. In particular, States Parties are obliged to obtain and share "the best scientific information available" in order to improve their decision-making.[76] This includes the implementation of "improved techniques for dealing with risk and uncertainty".[77] Moreover, States Parties have an obligation to apply the Guidelines for the Application of Precautionary Reference Points in Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks contained in Annex II UNFSA and to "determine, on the basis of the best scientific information available, stock-specific reference points and the action to be taken if they are exceeded".[78] Special emphasis is given to the requirement that precautionary management must take into account, among other things, any "uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species".[79]

[75] Article 5(c) UNFSA.
[76] Article 6(3)(a) UNFSA.
[77] Article 6(3)(a) UNFSA.
[78] Article 6(3)(b) UNFSA.
[79] Article 6(3)(b) UNFSA.

The basic rationale of the precautionary approach – also under the UNFSA – is the idea "that positive action to protect the environment may be required before scientific proof of harm has been provided".[80] Under the UNFSA, the precautionary approach entails a partial shift in the burden of justification from conservation to exploitation, in that it is not on the proponents of stricter CMM (such as a lower or even zero TAC) to provide evidence as it errs on the side of caution in light of scientific uncertainty. Instead, if there is a reasonable risk of harm,[81] it is those in favour of the potentially harmful activity who have to demonstrate, on the basis of the best available science, that their own proposed CMM (or the lack thereof) is sufficiently unlikely to cause unacceptable impacts.[82]

It follows that it is not sufficient to argue that the best available science does not prove with certainty that a certain CMM is required or that it is of insufficient quality to support precautionary action. To the contrary, if the available scientific advice indicates a need for precautionary conservation action, there is a high threshold of evidence required for a deviation from such scientific advice – and this threshold increases both with the extent of scientific uncertainty (lack of data, estimates based on long periods of time, rapid changes in the marine environment or relevant ecosystems, etc.) and the risks involved (e.g., low reproduction rates or high risks of non-compliance).

However, as uncertainty is the rule rather than the exception in fisheries science, the precautionary approach creates no general prohibition of fishing in the absence of absolute scientific certainty, but rather requires a balancing of precaution and risk on a case-by-case basis.[83] In other words, the precautionary approach does not normally dictate a single outcome of the decision-making process of an RFMO or individual State Party (with potential exceptions in the face of a stock collapse), but rather provides a binding methodology for decision-making that cannot be disposed of at the discretion of the relevant actors.[84]

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[80] Freestone, *supra* note 16, 296–297.

[81] In this context, "harm" refers to a condition that is worse than the previous condition from the perspective of the legally required or protected condition (such as MSY). In other words, a decline or stagnation of a stock below MSY constitutes harm in the context of legal instruments requiring management to achieve MSY and stock collapse or extinction would constitute an extreme form of harm.

[82] Freestone, *supra* note 16, 293.

[83] See, e.g., *ibid.*, 317; Francisco Orrego Vicuña, 'The Law Governing High Seas Fisheries: In Search of New Principles' (2004) 18 *Ocean Yearbook* 383–394, 387; Yoshinobu Takei, *Filling Regulatory Gaps in High Seas Fisheries: Discrete High Seas Fish Stocks, Deep-sea Fisheries and Vulnerable Marine Ecosystems* (Leiden: Manchester University Press, 2013), 99–101; Valentin J. Schatz, Alexander Proelss and Nengye Liu, 'The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean: A Critical Analysis' (2019) 34 *The International Journal of Marine and Coastal Law* 195-244, 219.

[84] Cf. Freestone, *supra* note 16, 319–320.

In application of the precautionary approach under the UNFSA, the impacts of the regulated activity must be determined by reference to Article 5 UNFSA, which contains overarching obligations for States Parties. In particular, States Parties are obliged to adopt CMMs that "ensure long-term sustainability of […] highly migratory fish stocks and promote the objective of their optimum utilization".[85] Moreover, they must, *inter alia*, base such CMMs on "the best scientific evidence available" and design such measures to "maintain or restore stocks at levels capable of producing maximum sustainable yield".[86] CMMs must also take into account "fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global".[87]

In addition, CMMs must aim "to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources".[88] Thus, a "complete disregard for stock sizes, or the repeated enactment of TACs resulting in fishing mortalities that exceed a stock's maximum reproductive potential, respectively, will usually violate the precautionary approach".[89]

2. The Precautionary Approach in the Framework of ICCAT

Within the framework of ICCAT, the requirements under the UNFSA have been further concretised in two instruments adopted by the Commission. ICCAT Recommendation 11-13 on the Principles of Decision-Making for ICCAT Conservation and Management Measures (Recommendation 11-13),[90] requires the Commission to immediately adopt CMMs "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" for "stocks that are overfished and subject to overfishing (i.e., stocks in the red quadrant of the Kobe plot)".[91] Additionally, the Commission is obliged ("shall") to "adopt a plan to rebuild these stocks taking into account, *inter alia*, the biology of the stock and SCRS advice".[92]

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[85] Article 5(a) UNFSA.
[86] Article 5(b) UNFSA.
[87] Article 5(b) UNFSA.
[88] Article 5(h) UNFSA.
[89] Schatz/Proelss/Liu, *supra* note 83, 219. See also Alexander Proelss, 'Fisheries', in Elisa Morgera and Kati Kulovesi (eds.), *Research Handbook on International Law and Natural Resources* (Cheltenham: Edward Elgar Publishing, 2016), 178–197, 178, 186 and 191.
[90] Recommendation 11-13 by ICCAT on the Principles of Decision-Making for ICCAT Conservation and Management Measures, 2013, https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-13-e.pdf (ICCAT 11-13).
[91] *Ibid.*, para. 3.
[92] *Ibid.*

Moreover, ICCAT Resolution 15-12 concerning the Use of a Precautionary Approach in Implementing ICCAT Conservation and Management Measures[93] states that the Commission "should" apply a precautionary approach "in accordance with relevant international standards" (such as the UNFSA and the FAO's Code of Conduct for Responsible Fisheries,[94] as mentioned in the preamble of the resolution) when making Recommendations under Article VIII ICCAT Convention.[95] Resolution 15-12 further spells out what an application of a precautionary approach entails, namely, (1) using "the best available scientific advice";[96] exercising "caution when scientific information is uncertain, unreliable or inadequate";[97] determining, "on the basis of the best scientific information available, stock specific reference points, in particular limit reference points, and the action to be taken if exceeded";[98] and not using "the absence of adequate scientific information as a reason to postpone or not to take conservation and management action in relation to the species under [ICCAT's] mandate".[99]

3. The Precautionary Approach in EU Fisheries Law

For the sake of completeness, it should be mentioned that the precautionary approach to fisheries management is also entrenched in the legal framework of the EU's Common Fisheries Policy (CFP).[100] Regulation (EU) 1380/2013 on the Common Fisheries Policy (CFP Regulation)[101] contains several references to the precautionary *approach*, which is considered a concept that derives from the precautionary *principle* as codified in Article 191(2) of the Treaty on the Functioning of the European Union (TFEU)[102] from the perspective of EU law.[103] Article 2(2) CFP Regulation obliges the EU to "apply the precautionary approach to fisheries management" and to "aim to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the

[93] ICCAT 15-12, *supra* note 71.
[94] See, in particular, the explicit endorsement of the precautionary approach in Paras. 6.5. and 7.5 of the Code of Conduct for Responsible Fisheries, FAO, 31 October 1995, http://www.fao.org/DOCREP/005/v9878e/v9878e00.htm.
[95] ICCAT 15-12, *supra* note 71, para. 1.
[96] *Ibid.*, para. 2(a).
[97] *Ibid.*, para. 2(b).
[98] *Ibid.*, para. 2(c).
[99] *Ibid.*, para. 2(d).
[100] See, e.g., Alexander Proelss and Katherine Houghton, 'The EU Common Fisheries Policy in Light of the Precautionary Principle' (2012) 70 *Ocean & Coastal Management* 22–30.
[101] Regulation (EU) No. 1380/2013 on the Common Fisheries Policy (11 December 2013), ELI: http://data.europa.eu/eli/reg/2013/1380/oj.
[102] *Treaty on the Functioning of the European Union* (2012), ELI: http://data.europa.eu/eli/treaty/tfeu_2012/oj.
[103] For detailed discussion, see Proelss/Houghton, *supra* note 100, 23–24, with further references. See also Miriam Köster, *Integration und Kohärenz im Meeresumweltschutz- und Fischereirecht der EU* (Berlin: Duncker & Humblot, 2019), 265.

maximum sustainable yield". The term "precautionary approach to fisheries management" is defined in Article 4(1)(8) CFP Regulation (by reference to Article 6 UNFSA) as "an approach according to which the absence of adequate scientific information should not justify postponing or failing to take management measures to conserve target species, associated or dependent species and non-target species and their environment". Moreover, the current negotiation mandate of the European Commission for ICCAT explicitly states that:

> In the framework of the ICCAT, the Union shall: […] act in accordance with the objectives and principles pursued by the Union within the [CPF], notably through the precautionary approach and the aims related to the maximum sustainable yield as laid down in Article 2(2) [CFP Regulation], to promote the implementation of an ecosystem-based approach to fisheries management, to avoid and reduce, as far as possible, unwanted catches, […], and to minimise the impact of fishing activities on marine ecosystems and their habitats".[104]

IV. Legal Assessment of the EU's Position

In its assessment of whether the precautionary approach under Articles 5(c) and 6 UNFSA has been applied in the 2021 EU proposal, this opinion relies on the SCRS's projections and recommendations as the best scientific information available within the meaning of Article 6 UNFSA. Moreover, particular regard is given to the vulnerable status of the species concerned as well as risks derived from operational and environmental factors with a direct impact on the stock as legally relevant aspects in the context of the precautionary approach.

- Choice of timeframe and level of ambition

Looking first at the best scientific information available, it should be highlighted that the SCRS recommended a zero TAC (retention ban) due to its projection that "a zero TAC will allow the stock to be rebuilt and without overfishing (in the green quadrant of the Kobe plot) by 2045 with a 53% probability", that "regardless of the TAC (including a TAC of 0 t), the stock will continue to decline until 2035 before any biomass increases can occur", and that "to be in the green quadrant of the Kobe plot with at least 60% probability by 2070, the realized TAC has to be 300 t or less".[105]

As mentioned in section II., CPs appear to agree on the basis of current draft proposals that the chosen timeframe for the recovery period is the year 2070, and this is included also in the

[104] Para. 1(a) of Annex I of Council Decision (EU) 2019/868 of 14 May 2019 on the position to be taken on behalf of the European Union in the International Commission for the Conservation of Atlantic Tunas (ICCAT), ELI: http://data.europa.eu/eli/dec/2019/868/oj.
[105] SCRS 2019, *supra* note 30, p. 231.

October 2021 EU proposal. Proposing and agreeing to such a long timeframe not only lacks the sense of urgency that is called for, given the vulnerable status of the stock, but also enhances the risk derived from errors, unknowns and uncertainties that could result in substantially negative impacts over this long timeframe. It should be noted that all projections made by the SCRS have been qualified by caveats that highlight the substantial uncertainty levels that underpin these projections. A significant cause of the uncertainty lies in the fact that these projections involve rebuilding targets that stretch far into the future. As such, any recovery is likely to be rendered more vulnerable to forecast or assessment errors, as well as to external risks such as climate change. Further, the modification of conservation and management measures to meet a 2070 target also inevitably delays the rebuilding of the NA-SMA stock, which could in principle be achieved by 2045 with at least a probability of 53% if a retention ban was implemented. Lastly, in evaluating whether their proposals involve an unacceptable level of risk, ICCAT CPs must not only have regard to these factors, but also to the likely intergenerational nature of the impacts, should their proposals fail to achieve the intended conservation and restoration objectives if they were to be adopted.[106]

- Uncertainties inherent to the proposed calculation methods

The workability of the October 2021 EU proposal is weakened by growing evidence of non-compliance with existing ICCAT data collection and reporting Recommendations.[107] As mentioned in section II., the October 2021 EU proposal provides that for the purpose of calculating the retention rate, the SCRS is to make an estimate of mortalities other than retention based on the data submitted by CPs, as well as scientific evidence. Availability of reliable and complete data is therefore key. However, it has been widely documented that some CPs struggle to comply with the annual reporting requirements.[108] Recent contributions by CPs suggest that this lack of comprehensive and accurate data is likely to persist. For example, Morocco asked for a derogation from observer coverage, electronic monitoring and data loggers from vessels of 12 m or less,[109] and it appears that CPs are not reporting their recreational fisheries data.[110]

[106] With regard to the intergenerational impacts of non-precautionary management, see Ray Hilborn, Jean-Jaques Maguire, Ana M. Parma, Andrew A. Rosenberg, 'The Precautionary Approach and risk management: can they increase the probability of successes in fishery management?' (2001) 58 *CJFAS*, https://doi.org/10.1139/f00-225. On the principle of intergenerational equity in international law, see generally Edith Brown Weiss, 'Intergenerational Equity', in Anne Peters (ed.), *Max Planck Encyclopedia of International Law* (Oxford University Press, 2021), paras. 4 *et seq.*

[107] See SCRS 2019, *supra* note 30, pp. 230 and 231. See also US Statement to Panel 4 – Second Round (2020), Doc. No. PA4-823/2020, https://www.iccat.int/com2020/FRA/PA4_823_FRA.pdf.

[108] P4 Report 2021, *supra* note 51, p. 5.

[109] *Ibid.*, p. 4.

[110] *Ibid.*, p. 55.

Misreporting of catches and/ or discards adds a significant layer of uncertainty that undermines attempts at sound management, particularly in the NA-SMA scenario where the extreme vulnerability of the stock means that the smallest error can have grave consequences.

These uncertainties are further exacerbated by the fact that post-release mortality is not yet fully understood. In particular, assessment of the haul-back mortality levels appears to have changed from the 30% mortality indicated in Recommendation 17-08, to 23% in Recommendation 19-06, to 36% in the October 2021 EU proposal.[111] Therefore, proposals need to take into account post-release mortality uncertainty as part of the SCRS' estimate of "mortalities other than retention". These risks, coupled with doubts over the ability of CPs to appropriately implement CMMs and accurately and comprehensively report catch data,[112] cast considerable doubts on whether the implementation of the October 2021 EU proposal would indeed have the desired effects and lead to precautionary management.

As mentioned in section II., it is unclear whether the methodologies proposed in the October 2021 EU proposal would result in a *de facto* retention ban at the present time. It is implied in the EU's explanatory note that the proposal's aim is to leave in place the possibility for a limited degree of retention "*once* mortality levels have descended below an agreed level" (emphasis added). As indicated by the best scientific information available, even a TAC of 0 t would result in a decline of the stock until 2035 before any biomass increases can occur.[113] This means that if the methodology proposed by the EU is adopted, it would be desirable that *at least* up until that point in time, the mortality goal is set to be equal to "mortalities other than retention", so as to ensure that the retention threshold remains equal to or smaller than zero. In line with the SCRS' recommendations described above, a retention ban until 2045 would appear to be mandatory to rebuild the stock in a reasonable time frame and with a probability of over 50%.

For the above reasons, a retention ban extending until 2035, preferably until 2045, is in the present authors' view preferable to ensure precautionary management in line with the UNFSA. Although a retention ban may appear to be a stringent measure at first sight, it is not disproportionate when the risk of stock collapse is taken into consideration. The proponents of a Recommendation that can reasonably be predicted to result in detrimental impacts on a vulnerable species must meet a high standard of proof in respect of the precautionary elements

[111] P4 Report 2021, *supra* note 51, p. 33.
[112] See SCRS 2019, *supra* note 30, pp. 230-231; P4 Report 2021, *supra* note 51, p. 55; Ecology Action 2021, *supra* note 48.
[113] SCRS 2019, *supra* note 30, p. 231.

of their proposals. As previously stated, any CP that is also a State Party to the UNFSA must, in accordance with Article 5(b) UNFSA, adopt CMMs that are "based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing [MSY]". States Parties must also take into account, amongst other things, "uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species".[114] Some of these uncertainties have been discussed earlier in this section. The aim of this approach is to ensure that proposals meet a science-based standard that convincingly reduces the risk of stock collapse and/or non-restoration within time frames that result in uncertainties that are reasonable from a scientific perspective. A zero TAC is also by no means the most effective or severe measure available to ICCAT given that it does not – at least in its currently proposed form – transform the NA-SMA into a choke species, which would result in the closure of all mixed fisheries that involve significant incidental catches of NA-SMA.

Lastly, the vulnerability of the species has been acknowledged by the SCRS, the EU, and other ICCAT CPs. The NA-SMA stock is being overfished to a point that threatens its reproduction. Evidence of the recognition of the vulnerability of the NA-SMA can be found both in the abovementioned projections by the SCRS, and has been documented by the EU and other CPs through their sponsorship of and subsequent decision to globally list the species in Appendix II to CITES.[115] This implies an acknowledgment that it is a species in respect of which trade must be controlled in order to avoid utilisation that could lead to its extinction. It has also been listed by the IUCN.[116] The status of the NA-SMA under CITES is legally relevant: As recognised by the arbitral tribunal in the *South China Sea Arbitration*, species listed in Appendix II to CITES, such as the NA-SMA, "are unequivocally threatened, even if they are not subject to the same level of international controls as Appendix I species".[117] Further, the tribunal found that "CITES is the subject of nearly universal adherence […] and […] forms part of the general corpus of international law that informs the content of Article[s] 192 and 194(5) [UNCLOS]".[118] Both of these provisions concern the protection of the marine environment and entail a "due diligence obligation to prevent the harvesting of species that are recognised

[114] Article 6(3)(b) UNFSA.
[115] CITES, Appendices I, II, III, https://cites.org/eng/app/appendices.php.
[116] IUCN Red List of Threatened Species 2019, *supra* note 26.
[117] *South China Sea Arbitration (Republic of the Philippines v. People's Republic of China),* Award, 12 July 2016, *PCA Case No. 2013-19*, para. 957.
[118] *Ibid.*, para. 956.

internationally as being at risk of extinction and requiring international protection".[119] In the same manner, CITES informs the content of Articles 5 and 6 UNFSA.[120] Therefore, the listing of NA-SMA in Appendix II to CITES significantly increases the threshold of precaution required in the context of ICCAT's management of this species. The fact that the EU's own SRG, as mentioned in section II. above, issued a negative opinion of NA-SMA specimens introduced from the sea or imported under the current ICCAT rules underlines this.

Overall, it is the present authors' view that the intrinsic and contextual uncertainties identified in the previous paragraphs cast a shadow on the potential of the October 2021 EU proposal in meeting the high standard of precaution required by Articles 5 and 6 UNFSA. Furthermore, should the probability ratios adopted be reduced from the lower limit of the current 60-70% ratio included in brackets in the EU proposal, the resulting Recommendation would be more likely to fail to meet that threshold, if adopted.

While the previously adopted ICCAT Recommendations applicable to the NA-SMA are not the subject of this opinion, the authors are aware that a lack of consensus in 2021 could result in the adoption of measures as set out in Recommendation 17-08 and Recommendation 19-06 (currently in force), neither of which contains retention limits. Recommendations 17-08 and 19-06 are in the present authors' opinion at odds with ICCAT Recommendation 11-13, which requires the Commission to adopt CMMs "designed to result in a high probability of ending overfishing in as short a period as possible" for "stocks that are overfished and subject to overfishing (i.e., stocks in the red quadrant of the Kobe plot)",[121] such as the NA-SMA. Further, Article 5(e) UNFSA requires States Parties to adopt CMMs aimed at restoring even populations of non-target species to levels above which reproduction is threatened. Should consensus for the adoption of a Recommendation containing measures to immediately halt overfishing and/or ensure stock restoration within reasonable time frames and with reasonable probability fail again in 2021, ICCAT CPs that are State Parties to the UNFSA would not meet the threshold established in this provision: repeatedly adopting measures that disregard the realities of the

[119] *Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan),* Order (Provisional Measures), 27 August 1999 1999, *ITLOS Reports* 280, para. 70; *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC),* Advisory Opinion, 2 April 2015 2015, *ITLOS Reports* 4, paras. 111, 120 and 140; *South China Sea Arbitration* (Award), *supra* note 117, para. 956.

[120] See the explicit reference to "endangered species" in Article 5(f) UNFSA. See also Yoshifumi Tanaka, 'Reflections on the Implications of Environmental Norms for Fishing: The Link between the Regulation of Fishing and the Protection of Marine Biological Diversity' (2020) 22 *International Community Law Review* 389–409, who more generally supports the idea of applying the arbitral tribunal's reasoning to environmental treaties other than UNCLOS.

[121] ICCAT 11-13, *supra* note 90.

stock and that result in fishing mortalities preventing its reproduction and recovery, is likely to fall short of the UNFSA's precautionary conservation and management standards.[122]

V. Conclusions and Potential Ways Forward

The available scientific evidence and advice, which the present authors are not called upon to doubt, warns of an imminent and grave risk of further harm to the already endangered and declining NA-SMA stock as well as considerable scientific uncertainties with respect to stock recovery over an extensive period of time, even if a zero TAC (retention ban) is implemented. It is ultimately for the States Parties of the UNFSA, either individually or – as in the present case – through ICCAT as the competent RFMO, to implement the applicable conservation and management obligations under the UNFSA to prevent further decline and ensure rebuilding.[123] This should not be misunderstood as discretion to knowingly take measures that, based on best scientific information available, not only fall short to apply the precautionary approach, but that are likely to result in further harm to the stock in question. ICCAT CPs should therefore strongly seek consensus to avoid defaulting to a position where the inadequate measures currently set out in Recommendation 19-06 are extended, or similarly ineffectual measures adopted.

It is the opinion of the present authors in respect of the October 2021 EU proposal that a precautionary approach in line with the UNFSA would require the introduction of a temporary retention ban for NA-SMA *at least* until 2035, better until 2045. Despite the fact that the (presumed) adoption of a 60-70% probability ratio appears in line with scientific evidence and advice, the proposal is weakened by the significant uncertainties inherent to the current 2070 rebuilding objectives, the need for reliance on CP catch data, and other variables that form part of the methodologies for calculating both the mortality goal and the retention rate. These current aspects of the October 2021 EU proposal cast doubt on its ability to achieve NA-SMA management in conformity with the UNFSA.

Should consensus fail on a sufficiently precautionary CMM regarding the NA-SMA in 2021, then ICCAT CPs that are States Parties to the UNFSA should consider (1) calling for a vote on a more precautionary proposal and/or (2) invoking the compulsory dispute settlement procedures under Part VIII of the UNFSA to obtain a legally binding judicial decision:

[122] See Schatz/Proelss/Liu, *supra* note 83, 219. See also Proelss, *supra* note 89, 178–197, 178, 186 and 191.
[123] See, e.g., Freestone, *supra* note 16, 321–322.

1) While ICCAT decision-making is normally based on consensus in practice, Recommendations may be adopted by vote[124] upon the request of a single CP.[125] The quorum for such a vote to take place constitutes two-thirds of CPs (i.e., currently 35 out of 52 CPs).[126] If an "appropriate Panel" exists for the matter at issue (in the present case, Panel 4), the required majority for a decision on a Recommendation depends on whether the Recommendation is proposed on the initiative of the Commission or on a proposal of the Panel. If the Panel has made a proposal (based on consensus or a simple majority of its members),[127] a simple majority of the CPs (i.e., currently 27 out of 52 CPs) suffices for the Recommendation to be adopted.[128] If the proposal is submitted within the framework of the Commission, a two-thirds majority of CPs (i.e., currently 35 out of 52 CPs) is required.[129] There is also the possibility of an intersessional vote in "cases of special necessity", which may be conducted "electronically via the Internet (e.g. e-mail, secure web site) or other means of written communication".[130] Against this background, CPs willing to adopt a Recommendation in conformity with their obligation to apply the precautionary approach under the ICCAT Convention and the UNFSA should request a vote on such a proposal. Ideally, the proposal will already have been endorsed by Panel 4 so that only a simple majority is required in the Commission. In the absence of such an endorsement or in the event of a non-precautionary proposal by Panel 4, a two-thirds majority will be required.

If the Recommendation is adopted, the CPs that opposed the Recommendation may object to the Recommendation to prevent it from becoming binding on them or, if a majority of the CPs object, from becoming binding at all.[131] However, making such an objection would come at a considerable political cost, particularly for actors that ostensibly strive for sustainability in fisheries, such as the EU and the US. Therefore, it remains to be seen if the EU and the US would be willing to expose the unsustainable and non-precautionary nature of their NA-SMA policy by making an objection that contradicts their own scientific advice (EU) and/or national approach towards shark management (US).

[124] See Article VIII(1) ICCAT Convention in conjunction with Rule 9 ICCAT Rules of Procedure.
[125] Cf. Rule 9(6) ICCAT Rules of Procedure.
[126] See Article III(3) ICCAT Convention in conjunction with Rule 9(3) ICCAT Rules of Procedure.
[127] See Rule 12(7) in conjunction with Rule 9(2) ICCAT Rules of Procedure.
[128] See Articles III(3) and VIII(1)(b)(ii) ICCAT Convention in conjunction with Rule 9(2) ICCAT Rules of Procedure.
[129] See Article VIII(1)(b)(i) ICCAT Convention in conjunction with Rule 9(2) ICCAT Rules of Procedure.
[130] See Rule 9(8) *et seq.* ICCAT Rules of Procedure.
[131] See Article VIII(3) ICCAT Convention.

2) If the Commission (1) does not adopt a Recommendation that is in conformity with the requirements of the UNFSA or the ICCAT Convention, or (2) if the EU and/or the US or Morocco lodge a formal objection to the Recommendation in order to evade its application to their fishing fleets, one or more CPs that are also States Parties to the UNFSA could invoke the compulsory dispute settlement procedures under Part VIII of the UNFSA.[132] Unlike the constitutive treaties of some other RFMOs, including that of the Western and Central Pacific Fisheries Commission (WCPFC) as another RFMO regulating highly migratory fish stocks,[133] the ICCAT Convention is outdated in that it does not contain modern decision-making and dispute settlement provisions that would allow for a review of its decisions by an "ad-hoc expert panel" or "review panel", or even through a *mutatis mutandis* application of Part VIII of the UNFSA.[134] Accordingly, the best procedural option for a CP willing to challenge the potential illegality of ICCAT's management of the NA-SMA or the objections by individual ICCAT CPs may be found directly in Part VIII of the UNFSA. Thus far, these procedures have not been invoked, which would render such proceedings – also in the context of RFMO management – unprecedented. However, the International Tribunal for the Law of the Sea (ITLOS) has (implicitly) shown openness to apply the precautionary approach in the past even in cases that were based entirely on UNCLOS (which, unlike the UNFSA, does not contain an obligation to apply the precautionary approach).[135]

Pursuant to Articles 30(1) and (2) UNFSA, States Parties to both the UNFSA and ICCAT may submit the following disputes with other States Parties to the UNFSA to compulsory dispute

[132] See further Ted L. McDorman, 'The Dispute Settlement Regime of the Straddling and Highly Migratory Fish Stocks Convention' (1997) 35 *Canadian Yearbook of International Law* 57–79; Tullio Treves, 'The Settlement of Disputes According to the Straddling Stocks Agreement of 1995', in Boyle and Freestone (eds.), *supra* note 16, 253-269; Alan E. Boyle, 'Problems of Compulsory Jurisdiction and the Settlement of Disputes relating to Straddling Fish Stocks', in Olav S. Stokke (ed.), *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes* (Oxford: Oxford University Press, 2001), 91-120; Valentin J. Schatz, 'The Settlement of Disputes Concerning Conservation of Fish Stocks in the Arctic and Antarctic High Seas: Towards Comprehensive Compulsory Jurisdiction?', in Nengye Liu, Cassandra M. Brooks and Tianbao Qin (eds.), *Governing Marine Living Resources in the Polar Regions* (Cheltenham: Edward Elgar Publishing, 2019), 196–221.

[133] Cf. Article 20 and Annex II of the *Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean* (5 September 2000) 2275 *UNTS* 43.

[134] See generally James Harrison, 'Key Challenges Relating to the Governance of Regional Fisheries', in Caddell and Molenaar (eds.), *supra* note 67, 79–102; Rosemary Rayfuse, 'Settling Disputes in Regional Fisheries Management Organisations: Dealing with Objections', in Hélène Ruiz Fabri, Erik Franckx, Marco Benatar and Tamar Meshel (eds.), *A Bridge over Troubled Waters: Dispute Resolution in the Law of International Watercourses and the Law of the Sea* (Boston: Brill, 2020), 240–276.

[135] *Southern Bluefin Tuna Cases* (Order (Provisional Measures)), *supra* note 119, p. 296; *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)* (Advisory Opinion), *supra* note 119, p. 59.

settlement under Part XV of UNCLOS regardless of whether they are also States Parties to UNCLOS:[136]

- Disputes concerning the interpretation or application of the UNFSA.
- Disputes concerning the interpretation or application of the constitutive treaty of an RFMO managing straddling or highly migratory fish stocks to which they are parties, including any dispute concerning the conservation and management of such stocks (this would include disputes concerning the interpretation or application of the ICCAT Convention or any ICCAT Recommendations).

An ad-hoc arbitral tribunal constituted under Annex VII of UNCLOS would have jurisdiction for a case on the merits brought against the EU.[137] The broad applicable law in such proceedings extends to the relevant provisions of UNCLOS, the UNFSA and "any relevant subregional, regional or global fisheries agreement" (including the ICCAT Convention) as well as "generally accepted standards for the conservation and management of living marine resources" and "other rules of international law not incompatible with [UNCLOS]".[138] Moreover, these provisions are to be applied "with a view to ensuring the conservation of the straddling fish stocks and highly migratory fish stocks concerned".[139]

Pending the constitution of this arbitral tribunal, the prescription of provisional measures "appropriate under the circumstances to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment" could be sought from the ITLOS.[140] Thereafter, the arbitral tribunal could prescribe provisional measures also "to prevent damage to the stocks in question".[141] Through this mechanism, a precautionary management of the NA-SMA could potentially be ensured until ICCAT adopts a Recommendation that is in conformity with Articles 5 and 6 UNFSA.

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[136] This aspect is important with respect to the US, which is not a State Party to UNCLOS, but a State Party to the UNFSA.
[137] Article 30(3) UNFSA in conjunction with Article 287(1)(c) and (3) UNCLOS.
[138] Article 30(5) UNFSA.
[139] Article 30(5) UNFSA.
[140] Article 30(1) and (2) UNFSA in conjunction with Article 290(1) and (5) UNCLOS.
[141] Article 31(2) UNFSA.