

**Marine Stewardship Council (MSC) Conformity Assessment Body
Response to Notice of Objection**

Usufuku Honten Northeast Atlantic longline bluefin tuna fishery

Prepared by

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1 Introduction

This document sets out the response of the Conformity Assessment Body (hereafter CAB) Control Union Pesca Ltd. (hereafter CUP) to the Notice of Objection submitted by WWF and PEW to CUP's report and recommendation to certify the 'Usufuku Honten Northeast Atlantic longline bluefin tuna fishery' (hereafter Usufuku Bluefin tuna fishery)

Following the acceptance of the objections against the proposed certification of the Usufuku bluefin tuna fishery on the 24th January 2020, the CAB CUP would like to provide our response to each of the objection points. We note that the Marine Stewardship Council (MSC) Objection Procedure (Annex PD) being followed is that published in the Fisheries Certification Requirements (FCR) 2.0 which is also the MSC standard, process and guidance used throughout the assessment process of this fishery. This document was prepared in accordance with Annex PD2.5 of the MSC Fisheries Certification Requirements v2.0 and its associated Guidance

In this response document we provide an overview of our approach to the objections, followed by a detailed review of the MSC clauses, critical guidance and guidance relevant to each of the objection points and how CUP conformed with FCR 2.0 in the Final Report of this fishery PD2.5.1.2. We account for the objection submissions of stakeholders and client as per PD2.5.1.3. Finally, where required, as per PD 2.5.1.4 we indicate and give reasons for any proposed changes to our Final Report and Determination in the light of the objections. These amendments are provided in an accompanying document

The objections were submitted by two parties, PEW and WWF, both of which were involved in the assessment process from the initial notification. Below we address the objections by PEW first and then from WWF. On objection points related to PI 1.2.1 both objection parties raised similar points and therefore the response by CUP provided to PEW in Section 3.1 and 3.2, apply equally to WWF in Section 3.7 and 0. CUP notes that written representation by PEW in support of WWF's objection and WWF in support of PEW were received as per requirement PD2.4.8. Support for both objections was also provided by The Ocean Foundation. We have considered these in our responses to each objection point, except where points raised in the written representation were not part of the original objections. From The Ocean Foundation this includes:

1. Reference to the percentage of catch from the western Atlantic population.
2. The Ocean Foundation's comments regarding jeopardizing the MSC's credibility and Theory of Change and misleading message to consumers.

Neither of these were raised in the objections and therefore neither are relevant to this process.

Of relevance to several of the objections is the auditability of the MSC Guidance in the FCR v2.0 (page 11). Objectors have used guidance from FCR v2.0 to justify their objections and therefore there is need for clarity on what is required from the CAB within the MSC standard. The MSC FCR is separated into three levels of clauses (requirements, critical guidance and guidance), split between two sections of the standard. Firstly, there is the standard itself with clauses relevant to individual components of the standard. These are requirements which must be followed by the CAB ('shall' statements). Secondly, there is the 'Guidance' section of the standard which provides the CAB with examples and expectations of what is deemed acceptable by the MSC with respect to scoring and process. The role

of the guidance according to the MSC is to *'help CABs to interpret the requirements and should be read alongside the requirements'*. Clarification on the auditability of the MSC Guidance is critical in understanding whether the CAB has made an error of procedure, scoring or condition setting and whether a reasonable CAB could have reached such a decision on the evidence available to it.

The MSC is clear on 'Guidance' under its 'Auditability' page 11 of the FCRv.2.0.

Auditability - ... guidance is not directly auditable. It is, however, expected that the critical guidance identified in this document will be followed by CABs where applicable unless there is a justification for not doing so. It is likely that this critical guidance would be referenced by the accreditation body in any non-conformity to related FCR clauses. Critical Guidance in the FCRv2.0 is denoted by '!!' and an orange left border.

For each of the objection points raised we review the requirements, critical guidance and where applicable guidance to that Performance Indicator or section and show how we attended to those in the Final Report. We then respond directly to the comments made by the objector on the issue raised.

Additionally, CUP wishes to make it clear to the Independent Adjudicator that the MSC Peer Reviewers for this fishery, who are MSC appointed independent experts received and reviewed the CAB responses to their peer reviews following publication of the Public Comment Draft Report (PCDR). The MSC Peer Review College sent the email (Appendix 1. Peer Review College Response) confirming that in the opinion of the Peer Reviewers, CUP had addressed their concerns for this fishery and no further comments were added. Further, the MSC independent auditors (ASI - Assurance Services International) also audited the PCDR report and raised no non-conformities against the standard in areas relating to the areas of objection.

2 Note on presentation

The information provided in the MSC Notice of Objection Form v2.0 has been incorporated into this report. No alterations to the objector's statements have been made.

For each objection, the MSC's instructions to objectors are shown in a blue text box. The objection and corresponding CAB response are given in separate sections.

3 Objection

3.1 PEW - Objection to PI 1.2.1a

3.1.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	PI 1.2.1 There is a robust and precautionary harvest strategy in place. (a) Harvest strategy design.
Reason	<p>CAB issued a score of SG100.</p> <p>SG60 and above require that a harvest strategy be in place. As noted by the CAB in the final report, “the MSC defines a harvest strategy as ‘the combination of monitoring, stock assessment, harvest control rules, and management actions, which may include an MP or an MP (implicit) and be tested by MSE.’” There is no harvest control rule, defined by MSC as “a set of well-defined pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points,” in place for Atlantic bluefin tuna. While 2020 management is set, including a quota for bluefin in the eastern Atlantic and Mediterranean Sea (BFT-E), there has never been a harvest strategy for BFT-E, nor is there one presently or one for 2021 and beyond. Indeed, this is why ICCAT is investing heavily in an MSE process, including by developing management objectives (see ICCAT Res. 18-03) and candidate management procedures designed to achieve those objectives.</p> <p>Therefore, SG60 is not met, let alone SG100.</p>
Rationale	<p>The process for setting the total allowable catch for BFT-E is neither well-defined nor pre-agreed, but rather is based on political negotiation. While the CAB is correct that the 36,000 t quota for 2020 is loosely based on an approximation of F0.1 estimated from a highly uncertain stock assessment, the CAB erred when it concluded that the current management system is responsive to the state of the stock. For example, several important abundance indices went down in 2018, but the quota still increased for 2020. Similarly, there is no agreement as to how the 2020 updated stock assessment will inform TAC setting for 2021. Instead, that TAC will be set by political negotiation at the November 2020 annual meeting. The CAB is also wrong when it states in the final report that “ICCAT is lacking a scientific basis for defining anything</p>

	<p>meaningful along the lines ‘if stock is X TAC should be Y’” as an HCR, as this is exactly what ICCAT is developing through the ongoing MSE process.</p> <p>The CAB also failed to consider that there is no agreement about how the monitoring data will be used in the stock assessment, another critical feature.</p>
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3.1.2 CAB response

PEW in their reason and rationale has not set forth clearly and precisely the basis upon which section of PD2.7.2.3 this objection is raised against as per PD2.3.4. The objection reason and rationale contain no reference to which MSC requirement the objector believes CUP failed to justify in the Final Report. PEW cite only the MSC definition of harvest strategy and harvest control rules (HCRs) and therefore our response focuses on those elements, and the requirements related those in this Scoring Issue.

This PI was scored by CUP at SG100: *The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in PI 1.1.1 SG80.*

3.1.2.1 General comments about scoring PI 1.2.1:

MSC defines a harvest strategy as ‘*the combination of monitoring, stock assessment, harvest control rules and management actions, which may include an MP [Management Plan] or an MP (implicit) and be tested by MSE*’ (MSC – MSCI Vocabulary v1.1). This Performance Indicator (PI) is connected to but distinct from the three subsequent PIs in Principle 1 which individually evaluate the components of the harvest strategy identified in the above definition (i.e. PI 1.2.2 – harvest control rule (HCR) and management tools/actions; PI 1.2.3 – monitoring; PI 1.2.4 – stock assessment). There is no MSC guidance regarding the extent to which detailed issues relating to specific components (e.g. the details of the monitoring or HCR) should also be taken into account in the scoring of 1.2.1 as well, except to state in guidance GSA2.4: ‘*This PI scores the overall performance of the harvest strategy, particularly the way that the different elements work together to keep the stock at levels consistent with reference points.*’

3.1.2.2 Requirements 1.2.1 Scoring Issue a:

- There are no clauses within FCRv2.0 that specifically identify key elements required to differentiate between SG80 and SG100 as per SA2.4.1 for Scoring issue a. Rather the CAB must use the Scoring Guidepost text alone to determine the score. The essential context here is whether at SG80 the elements of the harvest strategy work together towards achieving stock management objectives or at SG100 that the Harvest Strategy is designed to achieve stock management objectives.
- The only *critical guidance* for PI1.2.1a relates to fishery subsidies not relevant in this fishery
- The guidance section for PI1.2.1a states:
The elements of the harvest strategy need to work together. CABs should therefore consider the overall performance of the harvest strategy, and how its elements contribute to allowing the management system to be responsive to the state of the stock.
Key elements of harvest strategies include:
**the control rules and tools in place, including the ability of the management system to control effort, taking into account issues such as overcapacity and its causes;*

**the information base and monitoring stock status and the responsiveness of the management system and fleet to stock status.*

3.1.2.3 Approach to scoring 1.2.1 Scoring Issue a:

The rationale provided by CUP:

- Identifies the fishery management plan (Rec. 2018-02¹) and the management objective (maintaining biomass around $B_{0.1}$) and determines that this objective is consistent with MSC requirements (as defined in PI 1.1.1b).
- Identifies the HCR: i.e. fishing at $F_{0.1}$ to maintain the biomass at the target level of $B_{0.1}$.
- Identifies the principle management measures (actions) in place (i.e. TAC and other measures) and identifies that the TAC is consistent with the HCR (or actually a little more precautionary, reflecting the level of uncertainty in the estimates of management targets).
- Identifies that the harvest strategy includes provision for modification based on new information or if there is evidence that the management objective is not being met.
- Identifies that there are a large quantity of provisions for reporting and inspection (monitoring)
- Notes that all the required elements in the MSC definition of a harvest strategy (i.e. monitoring, stock assessment, HCR and management actions) are in place.

SG60 is met because the harvest strategy includes explicit management objectives consistent with PI1.1.1b SG80, and because these objectives are currently being met ($F < F_{0.1}$; please see rationale provided in PI 1.1.1b for details).

SG80 is met:

1. There are two lines of evidence that indicate that the harvest strategy is responsive to the state of the stock: a) F is required to be adjusted consistent with estimates of $F_{0.1}$ (as is currently the case) to maintain B at $B_{0.1}$; and b) there are provisions for review of the strategy and/or the management actions in the case that the strategy needs to be improved or is not working;
2. The elements of the harvest strategy work together: the management is based on an objective which can be estimated by the stock assessment; the management objective, HCR and actions are set out in a single coherent document (Rec. 2018-02); monitoring and research has focused on filling information gaps to improve the stock assessment; a MSE is underway by the same scientists who conduct the stock assessment, which will form the basis of a review of the management plan.

In relation to SG100, there is no guidance from MSC as to what constitutes 'designed' vs. 'elements working together' the key difference in the scoring guideposts between SG80 and SG100. In this case, CUP concluded that the harvest strategy is 'designed', in that management objective, HCR and management actions are incorporated into a single coherent management plan (ICCAT Rec. 2018-02)

¹ Rec. 18-02 has recently been replaced with Rec. 19-04 but this was only agreed in November 2019 and published in January 2020, it therefore came into existence after PCDR publication and cannot be used as a basis for objection PD2.3.4.4.

that has been systematically reviewed and renewed from previous iterations (Rec. 2017-07) (detailed in the report P1 background section 3.3.8,), with this work continuing in the MSE process referred to in paragraph 1 of Rec. 2018-02.

We believe that this analysis is clearly articulated in the text of the rationale, and is consistent with MSC Scoring Guideposts, requirements and guidance.

3.1.2.4 Response to specific comments by PEW:

Comments by PEW are shown in blue italic, CUP comments are in black.

There is no harvest control rule, defined by MSC as “a set of well-defined pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points”.

There is an HCR clearly defined in Rec. 2018-02 (maintain F at or below $F_{0.1}$ to maintain biomass at or above the reference point level of $B_{0.1}$); the management actions required to implement it are also clearly defined in Rec. 2018-02.

There has never been a harvest strategy for BFT-E ...

The statement above is clearly untrue. Section 3.3.8, paragraph 1 of the final report summarises the various rebuilding/management plans which have been in place: *ICCAT adopted a rebuilding plan for eastern bluefin in 2007, amended in 2013, 2014 (Rec. 2014-04) and 2017 (Rec. 2017-07). 2014-04 set TACs for 2015-17, and 2017-07 set TACs and quotas for 2018-2020... (Rec. 2018-02). In 2017, SCRS recommended based on the results of the stock assessment that the Commission move from a rebuilding plan to a multi-annual management plan; this was adopted in 2018 (Rec. 2018-02) and started in 2019.* This rebuilding strategy has been successful in rebuilding the stock.

... nor is there one presently or one for 2021 and beyond. Indeed, this is why ICCAT is investing heavily in a MSE process ...

It is true that quotas have only been set to 2020, because a further stock assessment is scheduled for 2020, from which revised estimates of F and $F_{0.1}$ will emerge, and hence TACs will have to be revised accordingly. This is normal, logical and planned for. However, Rec. 2018-02 does not expire at a specific point in time, rather paragraph 1 states that the management objective should be revisited once progress has been made with the MSE. Until that point, the HCR in 2018-02 remains in place and TACs are set accordingly. Just because there is an MSE process ongoing to improve elements of the harvest strategy, does not automatically mean that there is not a harvest strategy at present. (Very few fisheries have a harvest strategy based on a formal, quantitative MSE.)

The process for setting the total allowable catch for BFT-E is neither well-defined nor pre-agreed, but rather is based on political negotiation.

The HCR on which the TAC setting is based is clearly defined (as set out above) and agreed through 2020 when the next stock assessment is due to provide a new estimate of F in relation to $F_{0.1}$. It is true that the agreed TACs are not completely consistent with the HCR; the TACs were carried over from the previous rebuilding plan and are more conservative than the TACs implied by the base case estimate of $F_{0.1}$. This is clearly explained in the rationale for PI 1.2.2 (SIa) where, as explained above,

we consider the details of the HCR and its implementation. There was, no doubt, a process of political negotiation involved in the drafting of Rec. 2018-02, but this does not invalidate the outcome.

The 36,000 t quota for 2020 is loosely based on an approximation of F0.1 estimated from a highly uncertain stock assessment.

This statement is in some part true but at the same time somewhat misrepresents the situation. The ICCAT Scientific Committee (SCRS) has the following to say in their 2017 report (Section BFTE6, p. 102) [note that at this time, the management objective sighted was slightly different, hence the reference to 60%] [quote edited for concision as indicated by ...]:

The projections generated from the base VPA suggest that catches up to 38,000 t or 36,000 t have a greater than a 60% probability of maintaining F below F0.1 in 2020 or 2022 respectively ... It should be kept in mind, however, that the Kobe matrix cannot integrate some important sources of uncertainties that currently remain unquantified ... Several sensitivity runs of the VPA and preliminary results of other assessment models suggest catches at F0.1 that are notably lower than given by the base VPA. This points to the need to be cautious. // A case could be made to base TAC advice on the Kobe matrix results for either 2020 or 2022. However, if the TAC is set at 38,000 t through 2020, then it may have to be reduced below 36,000 t in 2021 and 2022 to maintain at least a 60% probability of not overfishing. Given the uncertainties discussed above, use of the catch figure of 36 000 t is advised due to the rebuilding time frame set to 2022. For these same reasons the Committee advises that the catches be increased using a gradual stepwise approach to 36,000 t in 2020.

In other words, the SCRS notes that based on the base case estimate of $F_{0.1}$, TACs could be higher, but for a range of reasons (echoed by PEW) it was more appropriate to be cautious. In 2018 the SCRS advised maintaining the stepped increases in the TAC previously agreed.

the CAB erred when it concluded that the current management system is responsive to the state of the stock.

We disagree; see our analysis above and how this is referenced against the requirements for this SI. We believe our conclusion that the harvest strategy is responsive to the state of the stock is reasonable and consistent with MSC requirements and guidance and we identify that the harvest strategy includes provision for modification based on new information or if there is evidence that the management objective is not being met in the rationale. As per the rationale presented in the Final Report and referencing Rec:2018-02: 'paragraph 1 allows for the plan to be modified based on the outcome of the MSE (currently underway; see Section 3.3.10), while paragraph 114 (Safeguards) allows the SCRS to propose adjustments to the TAC if stock assessment suggests that the plan is not achieving its objective and paragraphs 115-116 (Review clause) allow for i) limited annual review by Panel 2 and ii) review of the plan in 2020.'

several important abundance indices went down in 2018, but the quota still increased for 2020

The SCRS meeting in 2019 was held from 30 September-4 October 2019, with the report published a short while later. This was after the publication of the PCDR for this fishery (published 7 August 2019 MSC website: <https://fisheries.msc.org/en/fisheries/usufuku-honten-northeast-atlantic-longline-bluefin-tuna-fishery/@assessments>). In accordance with Annex PD of the FCR2.0 objections can only be based on information published in final form prior to the PCDR publication date (PD2.3.4.4). Should the fishery be certified, information after this date is considered at the first surveillance audit. The SCRS in 2018 stated the following (Section BFTE6, p. 107):

The 2017 advice included a recommendation to evaluate indices annually to advise on the continuation of the stepped increase. The indices which have been updated up to 2017 did not clearly indicate any change in the stock abundance. Consequently, the Committee is of the view that the stepped increase for 2019 from Rec 17-07 can be maintained.

In other words, in 2018 the SCRS provided no basis for CUP to think that any ad hoc adjustments to the TAC was required.

(As a side point on this question, a formal HCR requires that pre-agreed rules are followed; i.e. that TACs are set on the basis of a stock assessment, for three years until the next stock assessments. Tweaking these pre-agreed measures on the basis of other information, outside the formal agreed structure for stock assessment and TAC setting, seems to us a recipe for political interference in management, which is precisely one of the concerns raised by PEW.)

Similarly, there is no agreement as to how the 2020 updated stock assessment will inform TAC setting for 2021. Instead, that TAC will be set by political negotiation at the November 2020 annual meeting.

As the situation currently stands, Rec. 2018-02 was replaced by Rec.19.04² and this is in place until replaced by a new recommendation, which according to paragraph 1 should be once the replacement can be informed by the MSE. This is not likely to be by 2020, which is why a 'normal' stock assessment has been scheduled for 2020. Therefore, the management objective of Rec. 2018-02 will stand for 2020 and provides a formally agreed basis for setting the TACs based on the new estimates of F and F_{0.1} provided by the 2020 stock assessment. If the ICCAT 2020 plenary chooses to deviate from this agreed process, this would be a significant change to the current harvest strategy which would have to be taken into account for any MSC certification on this stock. However, CUP has no objective basis at present for evaluating as part of this assessment the management decisions that might be taken in November 2020. The MSC requires us to score based on the current agreed harvest strategy and its implementation up to the present and that's what we have done.

The CAB is also wrong when it states in the final report that "ICCAT is lacking a scientific basis for defining anything meaningful along the lines 'if stock is X TAC should be Y'" as an HCR, as this is exactly what ICCAT is developing through the ongoing MSE process.

This comment by CUP is not part of a scoring rationale against which this objection is raised, but was made as part of the CUP response to earlier comments from PEW on this Scoring Issue at the PCDR stage (Final Report p. 412). It may be that the MSE process will result in this being achieved, but it is not in place at present and is not due to be available before 2021 or 2022. (Given that the SCRS in 2017 was clear that the existing levels of uncertainty in the assessment are not likely to be reduced much further, we would not be optimistic that a definitive rule along these lines is possible even with an MSE.)

² Rec. 18-02 has recently been replaced with Rec. 19-04 but this was only agreed in November 2019 and published in January 2020, it therefore came into existence after PCDR publication and cannot be used as a basis for objection PD2.3.4.4.

The CAB also failed to consider that there is no agreement about how the monitoring data will be used in the stock assessment, another critical feature.

This point was also made by PEW in the PCDR comment period (Final Report p. 413-14) and was considered and responded to by CUP. There is no MSC clause / critical guidance or guidance requiring a fishery to define which monitoring data will be included in a stock assessment under this PI. We do not entirely understand what kind of agreement PEW is expecting and between which parties. The data to be used in a stock assessment is a decision for the participating scientists alone; this is the key task of the data preparation workshop prior to the assessment meeting itself (ICCAT 2017c). It is CUP's responsibility to follow the MSC requirements and audit whether monitoring data is available and incorporated into the Harvest Strategy.

CUP's response to PEW's previous comment is reproduced below.

Following the argument used in Galland et al. 2018, it seems to us that this would cross the line to managers interfering in the independent scientific process? The choice of input data and stock assessment model is in any case highly technical. As far as we can see, the management system at present allows the scientists to use the available data and models as they see fit to evaluate the state of the stock, which is considered appropriate.

3.1.3 Reference

MSC FCRv2.0

Galland, G.R. et al., 2018. On the importance of clarity in scientific advice for fisheries management. *Marine Policy*, 87, pp.250–254. Available at:

<http://www.sciencedirect.com/science/article/pii/S0308597X17304906> (supplementary information kindly provided to CUP by G. Galland).

ICCAT 2017a. Report of the Standing Committee on Research and Statistics, Madrid, 2-6 October 2017.

ICCAT 2017b. Report of the 2017 ICCAT bluefin stock assessment meeting, Madrid, 20-28 July 2017.

ICCAT 2017c. Report of the 2017 ICCAT bluefin tuna data preparatory meeting, Madrid, 6-11 March 2017.

ICCAT, 2017e. 17-07 RECOMMENDATION BY ICCAT AMENDING THE RECOMMENDATION 14-04 ON BLUEFIN TUNA IN THE EASTERN ATLANTIC AND MEDITERRANEAN, International Commission for the Conservation of Atlantic Tuna, Madrid. Available at:

<https://www.iccat.int/Documents/Recs/compendiopdf-e/2017-07-e.pdf>.

ICCAT 2018. Report of the Standing Committee on Research and Statistics, Madrid, 1-5 October 2018.

ICCAT, 2018e. (Rec. 2018-02.) *RECOMMENDATION BY ICCAT ESTABLISHING A MULTI-ANNUAL MANAGEMENT PLAN FOR BLUEFIN TUNA IN THE EASTERN ATLANTIC AND THE MEDITERRANEAN SEA 2018-02*, INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNA. Available at:

<https://www.iccat.int/Documents/Recs/compendiopdf-e/2018-02-e.pdf>.

ICCAT, 2018j. REPORT OF THE STANDING COMMITTEE ON RESEARCH AND STATISTICS (SCRS), INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS, Madrid, Spain, 2 to 6 October 2017. Available at:

https://www.iccat.int/Documents/Meetings/Docs/2018/REPORTS/2018_SCRS_REP_ENG.pdf

ICCAT, 2017k. REPORT OF THE 2017 ICCAT BLUEFIN TUNA DATA PREPARATORY MEETING, ICCAT, BFT STOCK ASSESSMENT SESSION – Madrid, Spain 6-11 March, 2017. Available at:

http://iccat.org/Documents/Meetings/Docs/2017_BFT_ASS_REP_ENG.pdf.

3.2 PEW - Objection to PI 1.2.1b

3.2.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	PI 1.2.1 There is a robust and precautionary harvest strategy in place. (b) Harvest strategy evaluation
Reason	As stated in previous stakeholder comments, ICCAT has recently moved from a rebuilding plan to a multi-annual management plan, which came into force in 2019 (Rec. 2018-02). The SG80 criteria states that: "The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives". The MSC further explains that to consider that the strategy is working, it needs to be in place for sufficient time to show results. As stated above, The TAC recently set for the BFT-e stock has been increased by ICCAT and projections made for the current quotas show that this management regime will lead to population decline in coming years. Moreover, the new management plan, just implemented, does not include a specific provision allowing ICCAT to suspend the fishery if necessary. The current management plan, which includes many changes in respect to the previous rebuilding plan (for example, as indicated by the assessment team in the report, some measures have been relaxed, e.g.: longer open seasons, additional derogations from the minimum size, provisions for quota exchange and small amounts of carry-over, etc.), has not been implemented long enough to consider that it is achieving its objectives. Therefore, this S.I. does not meet SG80.
Rationale	None provided

3.2.2 CAB response

PEW in their reason have not set forth clearly and precisely the basis upon which section of PD2.7.2.3 this objection is raised against as per PD2.3.4. The objection reason contains no reference to which MSC requirement the objector believes CUP failed to justify in the Final Report. PEW cite only the scoring guidepost text for PI 1.2.1b at SG80 and therefore our response focuses on that, and the requirements related to it.

This PI was scored by CUP at SG80: *The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.*

3.2.2.1 General comments about scoring PI 1.2.1:

Please see response to objection on 1.2.1 Scoring Issue a (Section 3).

3.2.2.2 Approach to scoring 1.2.1 Scoring Issue b:

MSC requirements and guidance for this SI are given below:

FCR2.0 clauses directed at this Scoring Issue (SI) are:

SA2.4.1 Teams shall interpret:

SA2.4.1.1 - "Evaluated" at SG100 to mean 'tested for robustness to uncertainty, appropriate to the scale and intensity of the UoA'.

SA2.4.1.2 - "Tested" at SG80 to mean the involvement of some sort of structured logical argument and analysis that supports the choice of strategy.

There is no critical guidance relating to this SI.

There is the following guidance providing further definition of 'evaluated' vs. 'tested'

GSA2.4.1 Interpretation of terms

As used in SI1.2.1b at the 100 level, an 'evaluation' may range from a subjective stakeholder process in small scale/data deficient (SS/DD) fisheries to quantitative Management Strategy Evaluation (MSE) as appropriate to the fishery.

'Testing' at the 80 level in SI1.2.1b can include the use of experience from analogous fisheries, empirical testing (for example practical experience of performance or evidence of past performance) and simulation testing (for instance using computer-intensive modelling such as Management Strategy Evaluation (MSE)). Testing and evaluation in Scoring Issue (b) at the Harvest Strategy level should consider the full interactions between different components of the harvest strategy, including the HCRs, use of information and the assessment of stock status. A score of 100 for this SI1.2.1b requires a broader evaluation than that considered in the evaluation of the robustness of HCRs in SI1.2.2b.

It is important to note that the wording of SG80 is that the harvest strategy 'may not have been fully tested'. In other words, to score SG80 as met, it is required that the fishery can demonstrate to the CAB that all the elements of testing in the above definition are present. Nevertheless, the rationale does discuss these elements: past performance, simulation testing (model projections) and various elements of the harvest strategy such as different stock assessment models.

The CUP rationale:

- Identifies the objectives of the harvest strategy.
- Sets out the evidence that the harvest strategy is achieving its objectives (i.e. stock assessment results, simulation testing, recent past performance), consistent with MSC's definition of 'testing' in SA2.4.1.2 and associated guidance.
- Sets out the uncertainties associated with this evidence which preclude the conclusion at SG100 that the strategy is 'clearly able to maintain the stock at target levels'.

We maintain that the rationale is reasonable and consistent with MSC requirements and guidance.

3.2.2.3 Response to specific points raised by PEW:

Comments by PEW are shown in blue italic, CUP comments are in black.

The MSC further explains that to consider that the strategy is working, it needs to be in place for sufficient time to show results.

There is nothing in the MSC requirements or guidance regarding the time over which a harvest strategy must be in place or evaluated to determine its effectiveness. The inclusion of simulation testing as a permissible component of 'testing' (GSA2.4.1) suggests that future projections can comprise evidence that the harvest strategy is working.

The TAC recently set for the BFT-e stock has been increased by ICCAT and projections made for the current quotas show that this management regime will lead to population decline in coming years.

Correct. Fishing at $F_{0.1}$ result in the biomass at (or fluctuating around) $B_{0.1}$, so if the stock is estimated to be above $B_{0.1}$, fishing at $F_{0.1}$ will result in a biomass reduction back down to approximately $B_{0.1}$. (The actual situation is more complex, but this would be the outcome in a set of deterministic projections, which is what are under discussion here.)

the new management plan, just implemented, does not include a specific provision allowing ICCAT to suspend the fishery if necessary

There is no requirement/critical guidance or guidance in the MSC standard which requires this provision as an element of a harvest strategy (e.g. in this or any other PI). Such a provision would not normally be a component of a fisheries management plan except under dire circumstances because

- i) for relatively long-lived species such as bluefin tuna, assuming operative monitoring (which is in place for this fishery as evaluated in PI 1.2.3), scientific perception of stock status does not change sufficiently fast to make it required;
- ii) it can cause economic hardship to people within the industry so would not be done unless absolutely required.

The current management plan, which includes many changes in respect to the previous rebuilding plan (for example, as indicated by the assessment team in the report, some measures have been relaxed, e.g.: longer open seasons, additional derogations from the minimum size, provisions for quota exchange and small amounts of carry-over, etc.), has not been implemented long enough to consider that it is achieving its objectives.

It's important to review this in the context that the MSC do not define any timeframes for implementation of the management plan. We would also take issue with the statement that the current plan includes significant changes in relation to the rebuilding plan. The major year-on-year change in management is the increase in the TACs, which as noted in the Final Report (Table 8) were not changed between rebuilding plan Rec. 2017-07 and management plan Rec. 2018-02. Other changes to management measures are summarised in the report (Table 9) and are for the most part not substantive; certainly, they are unlikely to be detectable in the stock assessment given the other much larger sources of variability and uncertainty.

3.2.1 References

MSC FCRv2.0

Rec. 2018-02. Recommendation by ICCAT establishing a multi-annual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean Sea.

ICCAT, 2017e. 17-07 RECOMMENDATION BY ICCAT AMENDING THE RECOMMENDATION 14-04 ON BLUEFIN TUNA IN THE EASTERN ATLANTIC AND MEDITERRANEAN, International Commission for the Conservation of Atlantic Tuna, Madrid. Available at:
<https://www.iccat.int/Documents/Recs/compendiopdf-e/2017-07-e.pdf>.

3.3 PEW - Objection to PI 1.2.2a

3.3.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	PI 1.2.2 There are well defined and effective harvest control rules (HCRs) in place. (a) Harvest strategy design and application.
Reason	<p>CAB issued a score of SG60.</p> <p>As discussed above, the CAB erred when it determined that there is an HCR in place for eastern bluefin tuna. There is certainly no pre-agreed plan that is “expected to reduce the exploitation rate as the point of recruitment impairment is approached.”</p> <p>Therefore, SG60 is not met, and the scoring is erroneous based on the lack of an HCR.</p>
Rationale	<p>The CAB incorrectly concludes that an HCR is in place. F0.1 is not a trigger reference point for BFT-E management, as asserted by the CAB in the final report. By the MSC’s definition, an HCR is “a set of well-defined pre-agreed rules or actions used for determining a management action in response to changes in indicators of stock status with respect to reference points.” ICCAT’s management system for east Atlantic and Mediterranean bluefin does not include any pre-agreed rules or management actions to be taken in response to changes in the stock status, nor agreement as to how to calculate indicators of stock status. The target of the new management plan, B0.1, can’t even be calculated.</p> <p>The current management measure (Recommendation 18-02) only directs the SCRS to adjust its advice based on the stock status and does not require future managers to adopt TACs, or take any other management action, in line with the adjusted advice. As stated above, the system relies on hope that the future managers will be reactive to the SCRS advice. As stated above, an HCR must require such management action, and there is an abundance of evidence that ICCAT is not likely to take the steps that the scientists suggest, should those steps call for a decrease in fishing. In fact, over the course of its history, ICCAT has followed the advice of its scientists only 39% of the time (Galland et al. 2018). Furthermore, ICCAT itself recognizes that HCRs are not in place for this fishery, as laid out in Paragraph 1 of the management measure that was considered by the CAB (ICCAT Recommendation 18-02). That is why ICCAT is in its fifth year of MSE to develop a proper HCR.</p> <p>Citation</p>

	Galland et al. (2018). On the importance of clarity in scientific advice for fisheries management. <i>Marine Policy</i> , 87:250-254.
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3.3.2 CAB response

PEW in their reason and rationale has not set forth clearly and precisely the basis upon which section of PD2.7.2.3 this objection is raised against as per PD2.3.4. The objection reason and rationale contain no reference to which MSC requirement the objector believes CUP failed to justify in the Final Report. PEW cite only the scoring guidepost text for PI 1.2.2a at SG60 and therefore our response focuses on that, and the requirements related to it.

CUP score this Scoring Issue at SG60: *Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.*

3.3.2.1 General comments about scoring PI 1.2.2:

As noted in our reply to PEW in Section 3.1.2, the HCR is considered in detail in this PI, as opposed to a general consideration of how well it is working and how it interacts with other elements of the harvest strategy in PI 1.2.1. The criticism levelled at the HCR in this objection under PI 1.2.1 (Sections 3.1 and 3.2) applies here instead, and is restated in the above Reason/Rationale.

GSA2.5 (non-critical guidance) states [irrelevant parts removed]:

This PI assesses the harvest control rules (HCRs) and actions that management takes in response to changes in the fishery and/or changes in status in relation to reference points.

HCRs are the arrangements by which a fishery expects to achieve the stock status outcomes expressed in PI 1.1.1. They are defined as the pre-agreed rules and management actions that will be taken in response to changes in indicators of stock status with respect to explicit or implicit reference points, and MSC expects these elements to be part of HCRs. The values adopted for such reference points are critical to the performance of the HCR, and CABs should ensure that the interaction between the rules of the HCR and the reference points is part of their assessment.

With the removal of the reference points PI in version 2.0 of the standard, parts of the guidance originally applied to the Reference Points PI 1.1.2 in CR v1.3 have now been moved and adapted to more clearly apply in this PI.

There are conceptual differences in the reference points that may be involved in scoring PI 1.1.1 and PI 1.2.2. ... The focus in this PI is thus on the reference points used in a fishery to trigger changes in management actions, and how they work in combination to achieve the outcomes required in PI 1.1.1.

The intent from MSC is suggesting the following:

- *There should be pre-agreed rules, pre-agreed management actions and explicit or implicit reference points* – This is considered in the rationale for Scoring Issue a.
- *The rationales should include a consideration of the appropriateness of the reference points and how they are used as part of the HCR* – The reference points and their operation is extensively considered in the rationale for Scoring Issue a

- *There should be consideration of how the HCR achieves stock assessment outcomes – This is considered in the rationale to Scoring Issue a (in relation to the rule) and Scoring Issue c (in relation to the tools).*

Finally, Box GSA5 – consideration of fishing mortality rate in MSC assessments states:

The general expectations in these cases are summarised below:

PI 1.2.2 (HCRs): To be regarded as working effectively, HCRs will normally maintain F equal to or less than F_{MSY} .

3.3.2.2 General comments about scoring 1.2.2 Scoring Issue a:

The CAB must adhere to the following requirements for this scoring issue:

Scoring ‘available’ HCRs at SG60

SA2.5.2 - In scoring issue (a) at the SG60 level, teams shall accept ‘available’ HCRs (instead of HCRs that are ‘in place’) in cases where:

- a. Stock biomass has not previously been reduced below the MSY level or has been maintained at that level for a recent period of time that is at least longer than 2 generation times of the species, and is not predicted to be reduced below $BMSY$ within the next 5 years; or*
- b. In UoAs where $BMSY$ estimates are not available, the stock has been maintained to date by the measures in use at levels that have not declined significantly over time, nor shown any evidence of recruitment impairment.*

SA2.5.3 - Teams shall recognise ‘available’ HCRs as ‘expected to reduce the exploitation rate as the point of recruitment impairment is approached’ only in cases where:

- a. HCRs are effectively used in some other UoAs, that are under the control of the same management body and of a similar size and scale as the UoA; or*
- b. An agreement or framework is in place that requires the management body to adopt HCRs before the stock declines below $BMSY$.*

SA2.5.2 and SA2.5.3 are not met for this fishery, therefore it is not possible to score SG60 as met on the basis of an ‘available’ HCR; therefore the HCR must be in place. The Scoring Issue is scored on this basis (no argument is made regarding an ‘available’ HCR).

There are also two elements of critical guidance which relate to this SI:

GSA2.5 - The requirement that an HCR reduces exploitation rates as the limit reference point is approached should not always be interpreted as requiring the control rule to deliver an exploitation rate that is a monotonically decreasing function of stock size: [some examples are subsequently given of possible alternatives, these are not marked as critical guidance] – this is in fact not the case in this fishery, and this is clearly explained in the rationale for the PI.

Generally understood’ HCRs at SG60 vs ‘well-defined’ HCRs at SG80

*HCRs should be regarded as ‘well-defined’ in the sense required to achieve an 80 score when they exist in some written form that has been agreed by the management agency, ideally with stakeholders, **and clearly state what actions will be taken at what specific trigger reference point levels.** [emphasis added by CUP]*

HCRs should be regarded as only ‘generally understood’ as required to achieve a 60 score in cases where they can be shown to have been applied in some way in the past, but have not been explicitly defined or agreed.

Up to and including the PCDR, this Scoring Issue was scored at SG80, but in response to comments from stakeholders (including PEW), the score was reduced to SG60 in the Final Report. MSC Technical Oversight highlighted the part of above guidance in bold but because it applies to SG80 and the Scoring Issue had already been rescored to conclude that SG80 is not met, the comment became irrelevant and was not considered further in detail by CUP (see Final Report p. 271). On further review of this rationale as a response to this objection, CUP accept that contrary to what is said in the Final Report rationale, the highlighted part of this guidance is not met. It's important to note that this relates to the scoring guidepost at SG80 which as per the Final Report is not met. It makes no difference to the score since we already concluded that SG80 is not met but to ensure consistency between the rationale and critical guidance the rationale we propose a revision, in the accompanying document, to ensure that it complies with all the above critical guidance.

There is also extensive non-critical guidance for scoring this PI (GSA2.5) which helps the CAB interpret the MSC's intent on acceptable methods for scoring this PI. We will not reproduce GSA2.5 here in full, since the CAB scored this SI at 60 (SG80 not met) the point at issue in this objection relates only to SG60 (whether it is met or not). The elements of non-critical guidance relevant to this fishery at SG60 are the following [summarised by CUP, not MSC wording]:

- At the SG60 level, HCRs should be likely to ensure that the stocks will be maintained above the PRI. [There is no quantitative definition for ‘likely’ provided for this PI –FCR v2.0 Table SA9 provides the quantitative definitions for PI probabilities– but if we assume that the definition in Table SA9 for PI 1.1.1 applies, it should be a probability =>70%; but qualitative analysis is also appropriate here.]
- It is acceptable for an HCR to be applied using effort control / technical measures over longer timeframes than annually, as long as it is based on occasional strategic stock assessments which can deliver defined target and/or limit reference points. We quote this element of the guidance in full (below), since it is relevant to PEW's contention that the current situation does not meet MSC's intent at SG60. Although this fishery is not a data-poor fishery (as per the guidance), it is clear that a detailed set of technical measures applied over several years, such as those established in Rec. 2018-02 alongside input and output controls, are sufficient to be considered a HCR as long as there is a process of periodic evaluation and adjustment through stock assessment and management objectives (target and/or limit reference points) which are in place for this fishery.

HCRs are often applied on a frequent basis, such as with the annual setting of TACs or effort restrictions. Such HCRs respond dynamically to the monitoring data from the fishery with regular adjustments to input/output type management measures. In data-poor fisheries which are managed without such input/output controls, management may comprise only technical measures such as size limits, gear restrictions, closed seasons and closed areas. In these cases, the specific terms of the

technical measures are usually set and fixed for a relatively long period of time (several years), based on occasional strategic stock assessments, that are shown to deliver defined target and/or limit reference points. Such an arrangement may be regarded as equivalent to a dynamic HCR operating over a longer time scale in cases where some indicators are monitored to confirm that the HCRs are delivering the intended targets for the stock. (GSA2.5).

The scoring and analysis for Sla in the Final Report is consistent with the above-summarised guidance.

3.3.2.3 Approach to scoring 1.2.2 Scoring Issue a

The rationale provided by CUP (both previously in the Final Report and revised in relation this objection):

- Identifies and explains the HCR.
- Identifies the reference points, how they are used and whether they are consistent with MSC's requirements for harvest strategy objectives.
- Identifies where and how the HCR is defined.
- Evaluates the way it has been applied (i.e. the TACs, plus other measures in Rec. 2018-02).
- Evaluates how the HCR would function should the PRI be approached, in conjunction with other elements of the harvest strategy.
- Identifies that the HCR is consistent with MSC guidance quoted above.

The revised rationale explicitly considers the above-quoted critical guidance on 'generally understood' vs 'well-defined' HCRs and removes the reference to a 'trigger' reference point (see further discussion below).

CUP maintains its conclusion that SG60 is met:

- i) The threshold for a 'generally-understood' HCR is met and exceeded; the HCR is clearly defined in a written form agreed by the management agency. It is therefore also 'in place'. This now explicitly follows MSC's critical guidance.
- ii) Consistent with non-critical guidance on implicit reference points (see under Heading 1 above) and on the HCR being likely to ensure that the stock is maintained above the PRI (see under Heading 2 above), the second part of SG60 ('expected to ensure ...') is met. However, because the HCR does not 'ensure' that the stock avoids the PRI, SG80 is not met.

We submit that this scoring is reasonable and consistent with MSC requirements and guidance.

3.3.2.4 Response to specific comments raised by PEW:

Comments by PEW are shown in blue italic, CUP comments are in black.

There is certainly no pre-agreed plan that is "expected to reduce the exploitation rate as the point of recruitment impairment is approached."

There is an agreed management plan (Rec. 2018-02) which sets an objective and TACs consistent with this objective. Exploitation at $F_{0.1}$ should maintain biomass at $B_{0.1}$, which is a target consistent with MSC requirements. There are also other elements in the management plan which support the conclusion that management is highly likely to be able to maintain the stock far from the PRI (MLS, capacity limits, provisions for review etc.), and there is a process for periodic monitoring (stock

assessment) and adjustment, consistent with MSC's guidance quoted above (GSA2.5, p.295). This conclusion is also supported by the conclusion of the stock assessment that even at the lowest point of the stock the PRI was not reached (see PI 1.1.1a).

The CAB incorrectly concludes that an HCR is in place

Please see above. '...the goal of maintaining the biomass around $B_{0.1}$, achieved by fishing at or less than $F_{0.1}$...' (Rec. 2018-02, paragraph 1). $B \geq B_{0.1}$ is the harvest strategy objective, fishing at $F \leq F_{0.1}$ is the HCR used to achieve the objective, and the TACs, technical measures etc. set out in Rec. 18-02 are the tools used to implement the HCR. Evidently Rec.2018-02 is in place.

F_{0.1} is not a trigger reference point for BFT-E management

This definition CUP used is now recognised as not the most appropriate definition of $F_{0.1}$. It was not intended to imply that it was used as a trigger within management in a formal way (e.g. it is not called a 'trigger reference point' by ICCAT). It was rather an explanation of the category of reference point it might come into, the management target being $B_{0.1}$, and $F_{0.1}$ being a reference point used by management to achieve and measure this target. As part of the review of our Final Report, CUP in the submitted rationales which support this document propose to revise this rationale as explained above and we have removed this wording.

ICCAT's management system for east Atlantic and Mediterranean bluefin does not include any pre-agreed rules or management actions to be taken in response to changes in the stock status,

Please see Section 3.1 in response to PEW's objection on 1.2.1a and the rationale in the Final Report. Referencing Rec. 2018-02: paragraph 1 allows for the plan to be modified based on the outcome of the MSE (currently underway; see Section 3.3.10), while paragraph 114 (Safeguards) allows the SCRS to propose adjustments to the TAC if stock assessment suggests that the plan is not achieving its objective and paragraphs 115-116 (Review clause) allow for i) limited annual review by Panel 2 and ii) review of the plan in 2020.

nor agreement as to how to calculate indicators of stock status.

CUP's role is to audit the documentation and evidence base of the fishery against the MSC standard. The decision on how to evaluate stock status and reference points (i.e. which indicators to use) is the remit of ICCAT stock assessment scientists.

The target of the new management plan, $B_{0.1}$, can't even be calculated.

True. This is why management using F rather than B reference points is increasingly the standard approach across fisheries – because F reference points (and particularly F_{MSY}) are usually easier to estimate than their B equivalents (e.g. ICES (International Council for the Exploration of the Sea; the group responsible for fisheries advice in Europe) systematically applies the EU's 'MSY approach' via F_{MSY} , not B_{MSY} which is usually not estimated). As the ICCAT scientists note, fishing at $F_{0.1}$ results in a biomass of $B_{0.1}$ (or fluctuating around $B_{0.1}$) by definition. HCRs based on F target reference points of F_{MSY} are perfectly acceptable under the MSC as per Box GSA5 and GSA2.5.

The current management measure (Recommendation 18-02) only directs the SCRS to adjust its advice based on the stock status and does not require future managers to adopt TACs, or take any other management action, in line with the adjusted advice.

As already noted, Rec. 2018-02 sets a clear management objective and a HCR (how the objective should be achieved) and provides for a set of tools (TACs etc.) and monitoring, consistent with this objective, to be applied up to the next revision at the 2020 stock assessment or the availability of the MSE. There is no clause or critical guidance or guidance within the MSC standard that indicates that the CAB are required to score this SI (or indeed PI) on suppositions about future management action. The CABs duty in the MSC process is to audit the current available evidence for the fishery against the standard. Any fisheries management body may decide at a given point to take decisions not consistent with its own objectives, but an MSC assessment can't operate based on surmise about possible management failure in the future. Should such an event happen, MSC has processes in place (surveillances / expedited audits) to deal with it for a certified fishery.

As stated above, the system relies on hope that the future managers will be reactive to the SCRS advice.

All MSC assessments have to operate on the assumption that managers will do what they say they are going to do unless there is evidence to the contrary; i.e. if it is the stated, agreed objective that $B_{0.1}$ will be achieved by fishing at $F \leq F_{0.1}$ (as in this case), CUP has to assume that this will be applied, unless there is objective evidence to lead us to suppose that it will not be. The rebuilding plans and now the management plan (Rec. 2018-02) were successfully applied and have reduced F considerably (see Final Report Figure 12; bottom and second-bottom right-hand plots), and the management measures currently agreed and in place within Rec. 2018-02 are consistent with stock objectives. There is therefore no such evidence to suggest that future management will not respond.

there is an abundance of evidence that ICCAT is not likely to take the steps that the scientists suggest, should those steps call for a decrease in fishing. In fact, over the course of its history, ICCAT has followed the advice of its scientists only 39% of the time (Galland et al. 2018).

Please see our analysis of Galland et al. (in relation to this fishery specifically) in our response to similar PEW comments on the PCDR (Final Report pp. 302-3, 408, repasted below). In the absence of any response from PEW to this analysis, we submit it is valid, and that the 39% statistic given above is misleading in the context of this fishery (BFT-e) as it applies across more than the stock under consideration in here.

Responsiveness to the state of the stock in the future:

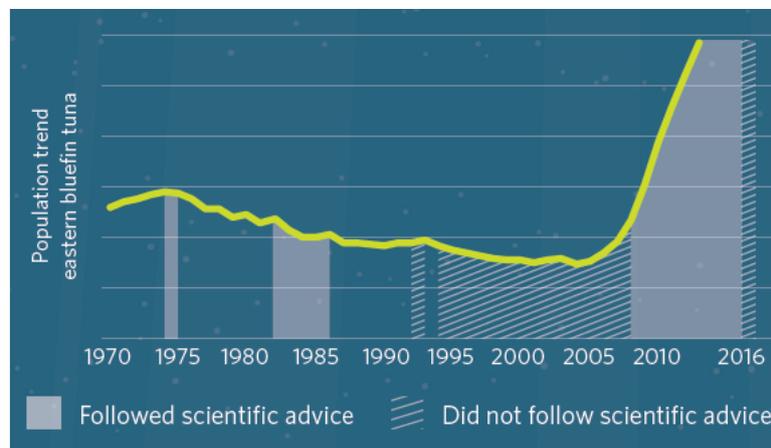
PEW provided an analysis of how ICCAT has responded to scientific advice for BFT-e from 1970-2016 (see Figure below taken from PEW (2017)). This shows that ICCAT have followed scientific advice on eastern bluefin every year from 2008-2015; the only exception the authors find since 2008 in their analysis is 2016.

If you look at the advice to the Commission from SCRS in 2016 (in the SCRS report 2016) it is the following (Section BFTE6 – Management Recommendations):

- The goal of achieving BMSY with at least 60% probability might already have been reached or will soon be reached. Therefore, the Commission should consider adding a new phase to the current recovery plan.
- Having considered the stock indicators, the Committee advises that catches not exceeding TACs in Rec. 14-04 are not expected to undermine the success of the rebuilding plan and are consistent with the goal of achieving FMSY and BMSY through 2022 with at least 60 % of probability.

Since the Commission did not change the TACs, which remained consistent with Rec 14-04 (Table 8) we can only suppose that by ‘did not follow scientific advice’ PEW meant that the Commission did not change the recovery plan in 2016. However, given that a stock assessment was due in 2017, and given that when the recovery plan was changed to a multi-annual management plan, the management measures were made slightly less strict as would be expected (see comparison in Table 9), to us the Commission decisions were i) logical and ii) more precautionary than the advice rather than the reverse.

On this basis, given ICCAT’s past performance for eastern bluefin specifically over the last decade, we see no basis for scoring down this SI based on scepticism about their future approach. The rebuilding plan took a good deal of effort to put in place and a good deal of sacrifice to implement, and the research that has gone into this stock since the start of the GBYP is unparalleled for any tuna stock. More generally, it is difficult to see how in practice how the CAB can score any MSC PI based on suppositions about future management action.



Source: (PEW 2017)

ICCAT itself recognizes that HCRs are not in place for this fishery, as laid out in Paragraph 1 of the management measure that was considered by the CAB (ICCAT Recommendation 18-02). That is why ICCAT is in its fifth year of MSE to develop a proper HCR.

The relevant part of Rec. 2018-02, paragraph 1 is as follows:

This objective shall be revisited and modified, if necessary, once Management Strategy Evaluation has made sufficient progress, when alternative management objectives can be considered, and Reference Points, Harvest Control rules and/or Management procedures can be adopted.

Since SG80 is not met, there is clearly room for improvement for the HCR (see rationale in Scoring Issue 1.2.2 b), which it is to be hoped the MSE can deliver. It is clear, however, from the above-quoted guidance that MSC’s intent here is to encompass HCRs which go wider than a formal quantitative rule as envisaged by ICCAT above; e.g. consistent with MSC there can be implicit reference points, HCRs may be considered ‘generally understood’ or ‘available’ under some conditions, the exploitation rate does not need to be a monotonically decreasing function of stock size, a set of agreed measures subject to periodic review can be considered equivalent to a dynamic HCR ...

As a result of this objection, we propose revised rationale in relation to the elements of SG80 which are met vs not met as explained above, plus minor amendments to the definition of F0.1 as discussed

above. However, we have not changed the overall scoring which concluded (and still concludes) that SG60 is met but SG80 is not met.

3.3.1 References

Galland, G.R. et al., 2018. On the importance of clarity in scientific advice for fisheries management. *Marine Policy*, 87, pp.250–254. Available at: <http://www.sciencedirect.com/science/article/pii/S0308597X17304906> (supplementary information kindly provided to CUP by G. Galland).

PEW 2017. Following the science is critical for Atlantic fish stocks - An infographic from the PEW Charitable Trusts. Available at: <https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2017/following-the-science-is-critical-for-atlantic-fish-stocks>

ICCAT 2016. Report of the Standing Committee on Research and Statistics, Madrid, 3-7 October 2016.

ICCAT 2017a. Report of the Standing Committee on Research and Statistics, Madrid, 2-6 October 2017.

Rec. 2018-02. Recommendation by ICCAT establishing a multi-annual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean Sea.

MSC FCRv2.0

3.4 PEW - Objection to PI 2.3.3a

3.4.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	<p>PI 2.3.3 - Relevant information is collected to support the management of UoA impacts on ETP species</p> <p>(a) Information adequacy for assessment of impacts</p>
Reason	<p>CAB issued a score of 80</p> <p>In order to meet SG80 on this PI, “some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species.”</p> <p>Based on the lack of observer coverage of the UoA in recent years, there is not adequate information to assess the mortality or the impacts of the UoA on ETP species.</p> <p>Therefore, the PI does not meet SG80 and the assigned scoring is unreasonable based on the available evidence.</p>
Rationale	<p>Between 2016 and 2018, there was 0% observer coverage of the fishing activities of the UoA (Final Report Table 5). Additionally, fisher-provided logbooks were shown to be incorrectly filled out and incomplete. The lack of observer coverage means that there is no independent record of any interactions with ETP species and no independent confirmation that required mitigation measures or handling guidelines were implemented during this 3-year period.</p> <p>Guidance from the MSC indicates that for “relatively rare” species like those ETP that the UoA might interact with, observer coverage above 20% is needed (GSA 3.6.3)</p> <p>In a similar situation in a recently certified fishery, where there was low observer coverage of a longline UoA, this PI was correctly scored as only obtaining SG60 and a condition was placed on the certification (Solomon Islands Longline Tuna Fishery).</p>

3.4.1 CAB response

CUP were surprised to receive an objection on this SI from PEW as no comments on this SI were previously received from this stakeholder. Comments on this SI were received from WWF on this SI at the PCDR stage and the letter of support from WWF to PEW received for this objection maintains a similar position to their comments at the PCDR stage.

PEW in their reason and rationale has not set forth clearly and precisely the basis upon which section of PD2.7.2.3 this objection is raised against as per PD2.3.4. The objection reason and rationale contain reference to the scoring guidepost at SG80 for PI2.3.3a and guidance GSA3.6.3. Therefore, our response focuses on these two elements of the standard.

3.4.1.1 General comments about scoring PI 1.2.2

Of relevance to this objection is the Auditability of the MSC guidance in FCRv2.0 (page 11).

Specifically, PEW cites a section of guidance from GSA3.6.3 which is not critical guidance: *‘relatively rare’ species like those ETP that the UoA might interact with, observer coverage above 20% is needed’.*

There is, however, ‘critical guidance’ relating to this SI (GSA3.6.3; see page 11 of FCRv2.0) as follows:

GSA3.6.3 Critical Guidance

At SG80, the information adequacy required for the estimation of the impact of the UoA on the outcome of the species should be balanced against the likely impact on that particular species.

Information adequacy is covered under GSA 3.6.3 critical guidance:

Generally, having only one form of data collection with a high level of potential bias or other limitation (e.g., logbooks or interviews with fishermen) by itself should not be enough to meet SG80 – additional information sources that compensate for the limitations would also need to be provided and assessed (see examples of information sources and how they could be combined in GSA3.6.3).

and

At the SG80 and 100 level in scoring issue (a), where a species is close to or below its limit or its status is uncertain, the team should expect that the UoA uses at least one method from Column A or an equivalent data source, and one or more from Column B to collect information to support the Outcome score for that species. However, where there is a high level of certainty that a species is well above its limit, less precaution is necessary and only two or more methods from Column B could be acceptable.

Table GSA5: Examples of data collection methods according to their level of verifiability

Column A (higher level of verifiability, lower bias)	Column B (lower level of verifiability, higher bias)
Observer programmes	Standardised logbooks
Electronic monitoring of location/position (e.g., VMS, AIS)	Interviews with fishers
Other technologies to monitor impact/compliance (e.g., cameras)	Enforced mandatory retention of all catch with full dockside monitoring
Independent research projects or programmes	Information obtained from co-management and community based management.

Section 3.4.3 of the Final Report details the observer records for the UoA satisfying a source from column A above. Section 3.4.4 details logbook and client records satisfying column B of table GSA5. Finally, section 3.4.5 of the final report details supportive evidence from independent research outside of the UoA again satisfying a source in column A. Based on the three sources above, even without observer records the CAB could justify an SG80 score based on the MSC critical guidance.

However, this would ignore that there are observer reports available for 3 of the past 6 years of the fishery (2013, 2014 and 2015) as detailed in Section 3.4.3 of the Final Report. Six years as the period of review for the audit of the fishery in the context of Principle 2 was not chosen arbitrarily by CUP. Critical guidance in GSA3.4.2 (specified for ‘main’ species, but relevant to all catch composition information including ETP and this PI) states: *This should include taking into account the variability of the catch composition over the last five years or fishing seasons and recognizing that some species might be ‘main’ some years but not in others. Depending on data availability, teams may choose a different length of the time series, but a rationale should be provided in all cases of the method chosen.*

This assessment was announced in 2018 and at the point of the site visit (22-08-2018) data was available from 2013 through to 2017 (5 years). Following the requirement (FCRv2.0 7.3.4.1) a further data request was announced in 2019. As part of this data request 2018 catch composition data from the management authority and logbooks was included in the analysis, bring the total to 6 years of evidence.

The wider context of the guidance (not critical guidance) which the objector refers to above is given below (underlining by CUP):

The level of observer coverage required to assess the impact of the UoA on outcome status depends on factors such as the frequency of capture/mortality, the variability in rates of capture/mortality, a desired CV and/or information required to show that upper confidence limit on mortality for a species is below a pre-defined sustainability threshold (Bravington et al, 2003; Wolfaardt, 2011). There is not a single optimum level of observer coverage that covers all fisheries and species caught/killed. Generally, for species that are highly variable, clumped in distribution and/or relatively rare, higher levels of observer coverage are needed (Wolfaardt, 2011). For more normal species, observer coverage rates above 20% provide only diminishing returns and small incremental improvements in the CV of catch estimates (Lawson, 2006).

On an annual basis observer coverage for the past 6 years for the UoA is 50 %, or 40 % for the past 5 years.

Importantly, at no point in the assessment process has the CAB (from sources listed in sections 3.4.3-4 of the Final Report) identified any ETP interactions with the UoA. There were ETP interactions from the wider Japanese fleet where 42 observer trips were reported between 2011 and 2015 (Final Report section 3.4.5). ETP interactions from those trips show a combined total of 7 seabirds and 1 seal. These averages (for comparative purposes) to 1 seabird every 6 trips and 1 seal every 42 trips for the fleet. The key question as per the guidance above (*frequency of capture/mortality*) is that given these statistics from equitable fisheries (the wider Japanese fleet) does the absence of three trips from the UoA (there is only one trip per year) mean that the observer coverage available for the UoA (3 years from the past 6) is not statistically representative of the wider fleet and fishing activity? The judgement of the CAB is that it is still statistically representative. The CAB has made considerable effort to meet each of the critical guidance points listed above and submit that there has been no

of procedure or scoring.

3.4.2 References

FCR 2.0

3.2 PEW - Objection to PI 2.3.3.b

3.2.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	<p>PI 2.3.3 - Relevant information is collected to support the management of UoA impacts on ETP species</p> <p>(b) Information adequacy for management strategy</p>
Reason	<p>CAB issued a score of 80</p> <p>In order to meet SG80 on this PI, “Information is adequate to measure trends and support a strategy to manage impacts on ETP species.”</p> <p>Based on the lack of observer coverage of the UoA in recent years, there is not adequate information to measure trends of the UoA’s impacts on ETP species.</p> <p>Therefore, the PI does not meet SG80 and the assigned scoring is unreasonable based on the available evidence.</p>
Rationale	<p>Between 2016 and 2018, there was 0% observer coverage of the fishing activities of the UoA (Final Report Table 5). Additionally, fisher-provided logbooks were shown to be incorrectly filled out and incomplete. The lack of observer coverage means that there is no independent record of any interactions with ETP species and no independent confirmation that required mitigation measures or handling guidelines were implemented during this 3-year period. This lack of information means that it is also impossible to measure any trends in impacts.</p> <p>Guidance from the MSC indicates that for “relatively rare” species like those ETP that the UoA might interact with, observer coverage above 20% is needed (GSA 3.6.3)</p> <p>In a similar situation in a recently certified fishery, where there was low observer coverage of a longline UoA, this PI was correctly scored as only obtaining SG60 and a condition was placed on the certification (Solomon Islands Longline Tuna Fishery).</p>

3.2.2 CAB response

CUP were surprised to receive an objection on this SI from PEW as no comments on this SI were previously received from this stakeholder. Comments on this SI were received from WWF on this SI at the PCDR stage and the letter of support from WWF to PEW received for this objection maintains a similar position to their comments at the PCDR stage.

PEW in their reason and rationale has not set forth clearly and precisely the basis upon which section of PD2.7.2.3 this objection is raised against as per PD2.3.4. The objection reason and rationale contain reference to the scoring guidepost at SG80 for PI2.3.3b and guidance GSA3.6.3. Therefore our response focuses on these two elements of the standard.

3.2.2.1 General comments about scoring PI 2.3.3

The CAB response to this objection is covered in the objection 2.3.3.a (section 3.4.1) since the same critical guidance applies to this SI. We emphasise again that the CAB has made considerable effort to meet each of the critical guidance points listed for this scoring issue (SI) and regard that there is no error of procedure or scoring evident.

The scoring guidepost 80 of this SI requires information adequacy to measure trends to support a strategy.

As defined in Section 3.4.1 the adequacy element of this guidepost is addressed by CUP through GSA3.6.3 in the Final Report. Regarding trends (change over time) in Section 3.4.1 we document how the adequacy of the information provided in Final Report provides assurance that the absence of observer data in the 3 years highlighted does not impact the trend. Specifically that:

- i) no point in the assessment process has the CAB (from sources listed in sections 3.4.3-4 of the Final Report) identified any ETP interactions with the UoA.
- ii) Information on the ETP interactions from the wider Japanese fleet show ETP capture at rates for 1 seabird every 6 trips and 1 seal every 42 trips.
- iii) Therefore based on ii. the absence of observers from three trips of the UoA would not significantly alter any trend perception nor influence ETP management strategy.

With reference to the Solomon Islands Longline Tuna Fishery the Regional Management Authority for this fishery requires an observer coverage of 5% for this longline fleet opposed to the 20% required by ICCAT for the BFT-e longline fleet, which as evidenced in the Final Report (section 3.4.3) is met by Japan as the Contracting Party to ICCAT.

3.3 WWF - Objection to PI 1.2.2a) and b) – Condition 1

3.3.1 Objection

Listing the conditions placed on the relevant performance indicator(s) and using the template below, please clearly:

- a) identify the reason(s) why you or your organisation believes that the condition assigned to the performance indicator within the Final Report cannot be justified because it fundamentally cannot be fulfilled, or
- b) identify the reason(s) why you or your organisation believes the condition setting decision was arbitrary or unreasonable in the sense that no reasonable CAB could have reached such a decision on the evidence available to it.

PI (SI)	PI 1.2.2 a) & b)
Condition 1	By Year 4 the client should be able to show that the HCR is able to ensure that the exploitation rate is reduced as the PRI is approached and is likely to be robust to the main uncertainties.
Reason	<p>In the client action plan for Condition 1 the client commits to lobby the Japanese Fisheries Agency (JFA) to work within the International Commission for the Conservation of Atlantic Tunas (ICCAT) to implement a rigorous Harvest Control Rule (HCR) that ensures that the exploitation rate is reduced as the PRI is approached and is likely to be robust to the main uncertainties in the stock assessment. The determination by the CAB that the client fishery can meet this condition under the current client action plan (CAP) is based on the underlying assumption that a certified fishery can effectively exert influence on the management decisions of a Regional Fisheries Management Organization (RFMO) and thereby achieve the milestones necessary to close the condition. However as pointed out by Peer Reviewer 2, the Usufuku Honten Northeast Atlantic longline bluefin tuna fishery, the client fishery is likely to have minimal leverage or influence on the decisions of ICCAT regarding the implementation of a HCR and it is therefore questionable whether this condition can be closed during the certification period.</p> <p>WWF contends that no reasonable CAB would have accepted the client action plan under the requirements of FCR v2.0 7.11.3 because progress on the management strategy evaluation (MSE) and the actual design and implementation of a HCR is the responsibility of ICCAT, the management entity and is thus largely outside the control of the client. Therefore as we explain in the rationale below, the CAB has accepted a client action plan which is not realistic or achievable because the client fishery likely has insufficient means to accomplish this task.</p>
Rationale	At 7.11.3 FCR v2.0 states that the CAB shall not accept a client action plan if the client is relying upon the involvement, funding and/or resources of other entities (fisheries

management or research agencies, authorities or regulating bodies that might have authority, power or control over management arrangements, research budgets and/or priorities) without:

7.11.3.1 Consulting with those entities when setting conditions, if those conditions are likely to require any or all of the following:

- a. Investment of time or money by these entities.
- b. Changes to management arrangements or regulations.
- c. Re-arrangement of research priorities by these entities.

7.11.3.2 Being satisfied that the conditions are both achievable by the client and realistic in the period specified.

ICCAT is a management entity as defined in 7.11.3.3 ("all fisheries management or research agencies, authorities, or regulating bodies that might have authority, power, or control over management arrangements, research budgets and/or priorities"). However there is no evidence presented that ICCAT has been consulted in accordance with 7.11.3.1 on what clearly qualifies as a change to management arrangements or regulations (i.e. the implementation of a HCR). The only letter of support that has been provided in Appendix 9 of the final report (FR p. 428) is from the Japanese Fisheries Agency (JFA) which provides a generic statement of support for the MSE process and considers that it should be 'discussed' with high priority. Therefore, 7.11.3.2 – "Being satisfied that the conditions are both achievable by the client and realistic in the period specified" – has not been satisfied such that any reasonable CAB would accept the current client action plan.

The single Unit of Assessment put forth by the client fishery consists of a single vessel that is catching 45MT annually out of a Japanese BFT-e quota allocation of 2250MT from a Total Allowable Catch (TAC) for the BFT-e fishery of 32000MT in 2019. The Usufuken UoA is therefore responsible for approximately 0.14% of the total catch. WWF considers it highly questionable whether, given the small fractional contribution of the single UoA vessel to the TAC, the client fishery will have sufficient leverage to influence the process and timeline for the implementation of adequate HCRs that will result in the closure of Condition 1.

The CAB has acknowledged the difficulty involved in ICCAT implementing an HCR that ensures that the exploitation rate is reduced as the PRI is approached and is likely to be robust to the main uncertainties in the stock assessment in section 3.3.9 of the Final Report (FR p. 36). The CAB notes that at the most recent ICCAT meeting the MSE process has already been delayed by a year due to numerous technical problems that have arisen in how to condition the models, selectivity assumptions for some fleets, migratory behaviour of spawners, exchange between stocks and some coding issues. The CAB further notes that: "Another issue with using the MSE to apply the current management strategy is that it is technically difficult to produce an operating model which can estimate F0.1 – the agreed target reference point, because estimating F0.1 requires information on age composition as part of the model output." Of critical

importance to the Client's ability to close Condition 1 during the initial certification period the CAB notes that ICCAT predicts that "it might be another 5 years before an operating procedure can be put in place based on F0.1 as a management target." The CAB's view in relation to the adoption of HCRs it is also expressed in the response to PEW comments on p. 417 in the FR: [...] "it seems to us highly premature to hope that this MSE process can take over from the current process for bluefin management any time soon, although we applaud the theory and the attempt." Thus the ability of the client fishery during the initial certification period seems highly questionable.

Furthermore in regards to the Client's ability to influence the MSE process in order to fulfill Condition 1, as pointed out by peer reviewer 2, there are no other certified Atlantic BFT fisheries with which the client could form coalitions to increase leverage on ICCAT to implement an HCR sufficient to meet the MSC requirements for PI 1.2.2. WWF doesn't necessarily advocate for other BFT fisheries to be certified in order to increase the leverage of MSC certified fisheries, however WWF does agree with the point made by PR2 about the limited leverage provided by the client to accelerate implementation of HCRs, or progress the ongoing Management Strategy Evaluation (MSE).

In response to PR2 comments on the limited direct control of the client to close conditions Peer Reviewer 2 states: "there are no other certified Atlantic BFT fisheries with which the client could form coalitions to increase leverage page 241 of FR). The CAB response states: "there is a second fishery in assessment for MSC as detailed in the harmonisation section of this report which as the PR notes will help leverage." WWF considers it highly premature for the CAB to refer to the outcome of an assessment and assumes that a fishery still under assessment (with unknown outcome) will support the closure of the condition set for PI 1.2.2, especially where the client cannot reasonably rely on this for 'leverage' in the closing of its own conditions. The CAB does not address this valid point made by Peer Reviewer 2 that the client fishery has no direct control to close Condition 1. In summary, the CAB does not provide an adequate rationale for having accepted the client action plan as required under FCR v2.0 7.11.3 where the condition is not likely to be achievable by the client fishery. Nor has the CAB required the appropriate documentation in the form of a letter of support that the responsible management body (ICCAT) has been consulted on the Client Action Plan as required under FCR v2.0 7.11.3.1.

3.3.2 CAB response

3.3.2.1 Consultation of the appropriate management body:

As noted by the WWF above, the MSC requirements for accepting the action plan are laid out at 7.11.3. This states: "*The CAB shall not accept a client action plan if the client is relying upon the involvement, funding and /or resources of other entities ... without: consulting with those entities when setting conditions...*"

The full context of the requirements subclauses of 7.11.3 are below:

7.11.3.1 - Consulting with those entities when setting conditions, if those conditions are likely to require any or all of the following:

- a. Investment of time or money by these entities.*
- b. Changes to management arrangements or regulations.*
- c. Re-arrangement of research priorities by these entities.*

7.11.3.2 - Being satisfied that the conditions are both achievable by the client and realistic in the period specified.

7.11.3.3 - Interpreting the word 'entities' in 7.11.3.1 to mean all fisheries management or research agencies, authorities or regulating bodies that might have authority, power or control over management arrangements, research budgets and/or priorities.

To implement the client action plan provided in Appendix 2 - Table 30. Condition 1 of the Final Report the client is reliant on the Japanese Fisheries Agency (JFA - Ministry of Agriculture, Forestry and Fisheries). To meet the requirement of 7.11.3 Appendix 9 of the Final Report is a letter of support provided by the Fisheries Agency Japan (JFA) providing evidence that this entity has been consulted and within that letter convey the intention and position of the Fisheries Agency regarding the MSC certification of Shofuku Maru No.1 [the client vessel].

Below we address each of the clauses above and show how the letter of support from the JFA and the current management regime and recommendations of ICCAT satisfy the needs of 7.11.3

As per section 3.5.1 of the Final Report, the International Commission for the Conservation of Atlantic Tunas (ICCAT), is the regional tuna fisheries management organisation (RFMO) and Japan is the UoA-vessel's country of registration (Flag State) and a Contracting Party (CP) of ICCAT. As an ICCAT CP, Japan has leverage and influence regarding the implementation of an HCR in several ways.

First, scientists from the Japan Fisheries Research and Education Agency and the National Research Institute of Far Seas Fisheries (one of the national institutes of the JFA) are actively involved in the scientific research necessary to develop HCRs that can be effectively implemented and in the ongoing Management Strategy Evaluation (MSE) process, directly as contributors and rapporteurs of Scientific Committee meetings (SCRS - ICCAT, 2020) and through international collaboration (see, for example, acknowledgements in Morse et al, 2019).

Second, Japan (a councillor from the Japanese Fisheries Agency (JFA - Ministry of Agriculture, Forestry and Fisheries) presently chairs the ICCAT Commission Panel 2 (on Northern temperate tunas (albacore and Atlantic bluefin)), and as such ensures transparent and constructive consideration of the SCRS and other subsidiary bodies reports and recommendations. Apart from three delegates from the JFA, other members of the Japanese delegation for Panel 2 include a representative from the Japanese Embassy in Spain and a scientist from the National Research Institute of Far Seas Fisheries. The WWF has Observer Status on Panel 2 meetings and is therefore familiar with the Japanese active involvement in developing a sustainable management system for BFT-E within ICCAT.

Third, at the Commission political level, Japan's commitment is also clear (see Japan's address to the 21st Commission meeting ICCAT, 2019c). At Commission meetings, the Japanese delegation also includes, in addition to delegates already mentioned for the SCRS and Panel 2, Japanese university

scientists and NGOs (fishing industry and marketing body OPRT, and WWF-Japan). WWF has Observer Status.

It is clear that ICCAT is committed to both MSE and stock assessment tasks moving forward. It has mobilised the required resources, and a stock assessment for BFT-E is scheduled from 2020, for the stated purpose of setting TACs for 2021 onwards while the MSE process is also underway (3 meetings in 2019, the next scheduled for 24-28 February 2020 – see <https://www.iccat.int/en/Meetings.html>). Paragraph 1 of Rec. 2018-02 states: *This objective shall be revisited and modified, if necessary, once Management Strategy Evaluation has made sufficient progress, when alternative management objectives can be considered, and Reference Points, Harvest Control rules and/or Management procedures can be adopted.*

It is important to note that ICCAT Secretariat may not be “consulted”. ICCAT’s Secretariat oversees the implementation of main functions for the Commission, such as the coordination of research programs, compilation of necessary fishery statistics and preparation of scientific, administrative and other reports as well as the budget preparation, disbursement of funds and accounting. Procedure dictates that fisheries management-related matters be discussed during ICCAT’s Commission meetings by the CP representative (i.e. the Japanese delegation), and that Panel 2 may propose to the Commission recommendations for joint action by the Contracting Parties based on investigations from the SCRS.

Based on the above 7.11.3.1.a and c are not required as the research priorities of the condition and current regime are aligned and already funded. The workplan for testing / evaluation and potential of the HCRs is already in place through SCRS (ICCAT 2018a) and as reviewed in Section 3.3.9 of the Final Report. This provided a workplan for the MSE process and there has since been periodic updates on its progress (Section 3.3.9).

Regarding 7.11.3.1.b ICCAT Reg. 2018-02 allows for the current management plan to be modified based on the outcome of the MSE, so changes to management arrangements or regulations are already foreseen and satisfied.

Therefore, CUP submits that the requirement for the client to provide evidence of consultation with the JFA was reasonable and appropriate, because i) JFA plays a formal role in management decision-making at ICCAT while the ICCAT Secretariat does not; and ii) the condition was not going to require any changes to funding inputs or research priorities by ICCAT, since the investments to improve the HCR are already in place and underway.

3.3.2.2 Leverage to achieve the condition

MSC requires that the CAB be ‘satisfied that the conditions are both achievable by the client and realistic in the period specified’ (7.11.3.2). Although it is the case that this UoA represents a small percentage of the overall BFT-E quota, leverage cannot be assumed to be directly proportional to quota allocation or UoA size. In this regard, leverage must be considered at the support level (Japan). It is important to note that the Japanese fleet targeting BFT-E in the Atlantic consists only of longliner vessels (as for this UoA) and that the Japanese BFT-E fishing fleet has a maximum of 35 vessels in its 2018 fishing plan (ICCAT, 2020). The one vessel considered by the audit is therefore an important part of the fleet. Furthermore, the client is a historical participant in the Japanese BFT-E fishery and the Japanese fishing rights regime rewards historical involvement. CUP has been satisfied throughout this process that Usufuku Honten has a good relationship with JFA, with evidence for this being provided, for example, in relation to the team’s interaction with JFA, facilitated by the client (for example in

relation to the VR on IPI stocks: see <https://fisheries.msc.org/en/fisheries/usufuku-honten-northeast-atlantic-longline-bluefin-tuna-fishery/@@assessments> and the observer data provided in Appendix 10 of the Final Report). The letter of support from the JFA clearly demonstrates their commitment to support improved management of the stock: As clearly stated in the opening statement of ICCAT annual meeting in 2018, *'Japan is in the position to support the MSE process as an important aspect of Atlantic bluefin tuna management, and consider that it should be discussed with high priority. We expect that the existing uncertainties in the management should be dealt through the MSE process'* (Final Report, Appendix 9; translation by CUP).

There are also some other more minor elements contributing to leverage, as noted by WWF, such as another fisheries currently in assessment (see <https://fisheries.msc.org/en/fisheries/sathoan-french-mediterranean-bluefin-tuna-artisanal-longline-and-handline-fishery/@@view>). In relation to the statement quoted by WWF in regard to this fishery (Final Report p.240) CUP did not intend to imply that any certification decisions had been taken on this other fishery; the point made was simply that since scoring for Principle 1 must be harmonised for fisheries on the same stock (PB3), if the two fisheries were to be certified there would be the same condition on PI1.2.2 for each and therefore another CP (the European Union) would be openly supporting ICCAT's progress in the matter.

More importantly, however, a critical element of CUP's conclusion that the condition is achievable is that work is already underway at ICCAT to improve the harvest strategy and develop a formal HCR – see analysis under Point 1 above. It is therefore not clear that 'leverage' is required; it is more oversight that is required to ensure that the eventual agreed HCR includes the required elements.

We note that Peer Reviewer 2 (who made the comment about 'leverage' that is quoted by WWF in his objection above) concluded that the client action plan is achievable within the timeframe (Final Report pp. 239-40). Peer Reviewer 1 concluded the same (Final Report p. 233). They rate the client action plan as insufficient in their general comments (Final Report p. 231) but this relates to a different condition regarding Principle 2 which not a part of this objection; in the specific comments on PI 1.2.2 (p. 233) they conclude that the condition is appropriate.

On this basis, CUP submits that the condition is achievable, because the client has provided evidence of support and commitment by JFA, and more importantly because work on the MSE is already underway and scheduled to continue through 2021 (or longer if required).

3.3.2.3 Timeframe

WWF is correct that the timeframe for finalising the MSE and using it to set TACs (and more importantly develop a HCR) has been pushed back by ICCAT because the MSE was proving difficult and complex (the issues which have arisen are set out in the Final Report Section 3.3.9). It had been planned that the MSE would be ready in time to set the next lot of TACs (i.e. from 2021 onwards – i.e. would be needed to be used by ICCAT for decision-making in 2020). The Species Group Meeting in 2019 (ICCAT 2019a) set out an Option A (MSE available to be used in 2020) vs an Option B (need for a 'standard' stock assessment in 2020), and SCRS in 2019 (ICCAT 2019b) concluded that Option A was not feasible. Appendices 15 and 16 of the SCRS report 2019 provide a revised timetable for the bluefin MSE process and it is now envisaged that the MSE will be available by the end of 2021 'at the earliest'.

The table below compares ICCAT's timetable for the MSE process with the audit timetable and milestones for this fishery, if certified during 2020. It is clear that there is room for the timetable put forward by SCRS to slide considerably without putting at risk the timetable of the client meeting the

condition. In Section 3.3.9 CUP notes a prediction that it might take ‘another five years’ to develop a management procedure based on $F_{0.1}$ (quoted by WWF above). Frustratingly, we have not been able to track down the source of this analysis in any of the MSE reports, but in any case, even if this prediction was made in 2019 (the latest possible date), it gives an end date of 2024 which would Year 4 of any certification for this fishery, and within the timeline of the certification cycle. It is also worth noting that any management procedure would not have to be based on $F_{0.1}$ as a target; it is the target set in Rec. 2018-02 currently because it is measurable in the stock assessment. SCRS (ICCAT 2019b, Appendix 16) set 2021 as the target year to finalise the objectives of the management procedure (see below).

Year	MSE targets (SCRS report 2019, Appendix 16)	MSC condition milestones
2020	Stock assessment. Adopt reference grid, start peer review, select several candidate management procedures	Certification – no milestones
2021	Finalise objectives and performance indicators, propose exception circumstances and interim management procedure for adoption by Commission.	Year 1 audit ~1 May 2021: The client should support the MSE process to improve the harvest strategy
2022		Year 2 audit: The client should support the MSE process, and work to ensure that any recommendations as to changes in the management plan arising from that process, which would make the harvest strategy more robust to uncertainty and would ensure a reduction in the exploitation rate at low biomass (e.g. by agreeing a LRP or by other means), are incorporated into management
2023	Stock assessment	Year 3 audit: As Year 2
2024		Year 4 audit: The client should demonstrate that the harvest strategy will ensure that the exploitation rate is reduced as the PRI is approached and is robust to the main uncertainties.

Therefore, CUP submits that the timeframe for the condition is reasonable and achievable.

3.3.2.4 Precedent

We appreciate that in MSC assessments, precedent plays a role which is subservient to that of the Certification Requirements and Guidance (i.e. inappropriate scoring in Fishery A is not a reason for inappropriate scoring in subsequent Fishery B). However, MSC requires harmonisation, meaning that scores and conditions for overlapping fisheries must be aligned.

CUP submits that on this basis it is reasonable that a CAB would accept a condition and client action plan aligned with these other fisheries, as long as their own analysis (summarised above) also concluded that MSC guidance and requirements are met.

3.3.1 References

ICCAT, 2018a. REPORT OF THE STANDING COMMITTEE ON RESEARCH AND STATISTICS (SCRS), INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS, Madrid, Spain, 2 to 6 October 2017. Available at:

https://www.iccat.int/Documents/Meetings/Docs/2018/REPORTS/2018_SCRS_REP_ENG.pdf

ICCAT 2019a. Report of the 2019 intersessional meeting of the ICCAT bluefin tuna species group. Madrid, 11-15 February 2019.

ICCAT 2019b. Report of the Standing Committee on Research and Statistics, Madrid, 30 September-4 October 2019.

Rec. 2018-02. Recommendation by ICCAT establishing a multi-annual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean Sea.

For the ICCAT Secretariat organigram, see <https://iccat.int/en/secretariat.html>

ICCAT, 2019c. Japan's Address and Statement to the Commission, ICCAT Report for biennial period, 2018-19 PART I (2018) - Vol. 1 English version COM: 62.

ICCAT, 2020. Report of the 2019 second intersessional meeting of the ICCAT Bluefin tuna MSE Technical Group SCRS/2019/012 Collect. Vol. Sci. Pap. ICCAT, 76(1): 38-79 (2020) from https://www.iccat.int/Documents/CVSP/CV076_2019/colvol76.html

Morse, M.R., L.A. Kerr and S.X. Cadrin, 2019. Evaluation of an F0.1 management procedure using an alternative strategy evaluation framework for Atlantic Bluefin tuna. SCRS/2019/017 Collect. Vol. Sci. Pap. ICCAT, 76(2): 71-99 (2019) from https://www.iccat.int/Documents/CVSP/CV076_2019/colvol76.html

3.4 WWF - Objection to PI 1.2.3c – Condition 1

3.4.1 Objection

Listing the conditions placed on the relevant performance indicator(s) and using the template below, please clearly:

- a) identify the reason(s) why you or your organisation believes that the condition assigned to the performance indicator within the Final Report cannot be justified because it fundamentally cannot be fulfilled, or
- b) identify the reason(s) why you or your organisation believes the condition setting decision was arbitrary or unreasonable in the sense that no reasonable CAB could have reached such a decision on the evidence available to it.

PI (SI)	PI 1.2.3 c
Condition 1	By Year 4 the client should be able to show evidence that there is good information on all other fishery removals from the stock.
Reason	<p>The Client fishery has not consulted directly with ICCAT, the primary entity responsible for the collection of data on other fishery removals in the BFT-e fishery as required under FCR v2.0 7.11.3.1. In addition, analogous to the point of objection to Condition 1, WWF strongly</p> <p>questions whether Condition 2 is achievable by the Client given the small fractional contribution of the UoA to catch and the lack of influence that the client may have on the collection of data on other fisheries and IUU removals required for the closure of Condition 2. Under FCR v2.0 7.11.3.2 the CAB should not accept a client action plan without being satisfied that the conditions are both achievable by the client and realistic in the period specified.</p>
Rationale	<p>The condition set by the CAB for PI 1.2.3 scoring issue c) requires that the Client fishery should be able to show evidence that there is good information on all other fishery removals from the stock. The Milestone for Year 4 also states that all significant sources of removals from the stock should be quantified in order to obtain a score of 80 by the end of the certification period. However the milestones for Years 1-3 only require the Client to consider how to best support and subsequently provide support for projects that aim to quantify IUU and recreational removals from the BFT-e stock. As such the condition setting by the CAB creates an internal inconsistency between the requirements of interim milestones and the required end result of Condition 2, making it highly likely that the Client will not be able to adequately fulfill the condition. The ability of the Client to fulfill Condition 2 is further complicated by the aforementioned small fractional contribution of the UoA to catch and the lack of influence that the client may have on the collection of data on other recreational fisheries and IUU removals at RFMO level which is the responsibility of ICCAT. WWF objects to the</p>

	<p>condition set for PI 1.2.3c on the basis that no reasonable CAB should be satisfied that the requirements of Condition are both achievable by a client fishery at the scale of Usufuku Honten UoA and realistic in the period specified.</p> <p>It is also clear from the letters of support provided in Appendix 9 of the final report that the CAB has not consulted with ICCAT as required under 7.11.3.1 As stated above under the objection to Condition 1, ICCAT is a management entity as defined in 7.11.3.3 However there is no evidence presented that ICCAT has been consulted in accordance with 7.11.3.1 on what will clearly require investment of time or money by these entities and re-arrangement of research priorities.</p>
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3.4.1 CAB Response

3.4.1.1 Consultation with ICCAT

Please see response to the previous objection on PI 1.2.2.a (Section 3.3.2); the same analysis applies here in relation to requirement 7.11.3.

In addition, Japan as an ICCAT CP is not working in isolation within ICCAT. In its present position as Chair of ICCAT Panel 2, the Japanese representative reminded the Commission that “*ICCAT needs to revise the management plan of E-BFT, taking into account the current stock status as well as recent alleged IUU cases*”, and “*express(ed) our appreciation to the EU for their hard work in developing the draft proposal and we look forward to fruitful discussion on the issue. Finally, this special meeting will address the SCRS-recommended roadmap of the MSE process. Japan would like to share its view that ICCAT should intensively prioritize its MSE-related works on bluefin tuna at this stage*” (ICCAT, 2019a: 62).

Importantly, Japan’s current level of involvement and influence within ICCAT, including for matters of data collection, is much higher than this vessel’s or the total Japanese quota share of the E-BFT. Japan’s CP annual contribution to ICCAT’s budget in 2019 was the third highest of all 53 CPs behind that of the EU and Ghana, just ahead of the USA. Japan remains the world’s largest trader of E-BFT, and financial contributions to the ICCAT eBCD System, for example, are financed by additional annual contributions made by those members of the Commission that catch and/or trade Atlantic bluefin tuna, including Japan (ICCAT, 2019b).

3.4.1.2 Consistency of milestones

The milestone at the end date of the condition (i.e. the audit year in which the team determines the condition should be closed – in this case Year 4) is fixed by the wording of the relevant SI at SG80 by clauses FCRv2.0 7.11.1.2 and 7.11.1.3 (i.e. in this case SG80 is ‘There is good information on all other fishery removals from the stock’). In review at this objection CUP’s Year 4 milestone did not say exactly this: it says that ‘all significant sources of removals from the stock are able to be quantified’. Although the meaning is the same, we propose to adjust the milestone to reflect exactly the wording of SG80. The other annual milestones are for the CAB to set as interim stages between the current situation and the end result of SG80 and which provide auditable reference points. Because the CAB is not permitted to give any indication in these milestones as to how the client should achieve them, they are necessarily unspecific and anodyne. CABs are required to follow ISO17065 clause 4.2.6d – *shall not*

offer or provide consultancy as per MSC General Certification Requirements (GCR2.4.1 -Section 2 Normative documents). The actions specified by the client in the client action plan usually therefore form a firmer basis for auditing progress in intermediate years, although both actions and milestones are auditable.

3.4.1.3 Achievability

In relation to information on removals from the stock, the issues identified do not involve either the UoA or Japan, but mainly relate to EU countries. There are, however, various lines of evidence to show that the condition can be completed in the required timeframe (four years – the maximum permitted for this PI). These are given below:

- Japan has been an important contributor to ICCAT for monitoring and managing tuna fisheries, under the ICCAT-Japan Capacity Building Assistance Programme (JCAP) which according to SCRS (2019) is planned to continue as JCAP-2. Although bluefin has not been a focus recently, there is scope for this project to support the needs of their own fisheries.
- The ICCAT GBYP is continuing with support from the EU. One of the objectives of this project is to improve catch data (see Final Report Section 3.3.10.2). Clauses 7.11.3.1.a and c are then not required as the research priorities of the condition and current regime are aligned and already funded.
- ICCAT has a Permanent Working Group for the improvement of ICCAT statistics and conservation measures (see report Annex 11 to ICCAT plenary report 2018). This working group is responsible for working on improvements to the eBCD reporting system, and at the 2018 meeting discussed the issue of EU IUU with Japan expressing their will to cooperate on the issue. The relevant paragraph (p.728) is quoted below.
- ICCAT Rec. 2019-15 establishes an ICCAT working group on bluefin tuna control and traceability measures.
- Rough estimates of the level of IUU are already available and the European Commission is conducting an audit relating to bluefin tuna farms; see for example <https://www.europol.europa.eu/newsroom/news/how-illegal-bluefin-tuna-market-made-over-eur-12-million-year-selling-fish-in-spain>; <https://timesofmalta.com/articles/view/how-the-tuna-racket-operates.702807> – and ideas are being put forward as to how to improve monitoring (e.g. Hosch 2019; see also discussion in the above working group report on this issue).
- A second fishery in assessment is from the EU (France). Although we are well aware that no assumptions can be made about certification for any fishery, should this fishery be certified it will inevitably have the same conditions on Principle 1, because of MSC requirements for harmonisation.

Quotation from Report of Permanent Working Group for the improvement of ICCAT statistics and conservation measures, 2018 (in 2018 ICCAT Commission plenary report, Annex 11, p.728):

The United States (US) thanked the EU and enquired about the difficulties faced, in particular whether they had identified any weakness in the eBCD programme that may have contributed to the ongoing large-scale investigation in the EU as discussed in the COC, and potentially what changes could be foreseen to address them. The EU stated that the investigation is at a very preliminary stage and as such no concrete conclusions could yet be drawn, in particular on where any potential weakness in the

programme may lie. Nonetheless, the EU confirmed that all eBCD requirements had been fully complied with and that the issues may well be structural and with ICCAT conservation and management measures themselves. The EU will nonetheless work closely with CPCs and keep ICCAT well informed on the status of the investigation and on the results when concluded to ensure an effective eBCD programme and prevent IUU activities. Japan voiced their concern on the case and stated they will remain in close cooperation with the EU and other parties to ensure any loopholes in the programme are quickly addressed.

3.4.2 References

ICCAT 2018. Report for biennial period 2018-19, Part 1 (2018), Volume 1 (Commission) (for report of the Permanent Working Group for the improvement of ICCAT statistics and conservation measures, see Annex 11).

ICCAT, 2019a. Japan's Address and Statement to the Commission, ICCAT Report for biennial period, 2018-19 PART I (2018) - Vol. 1 English version COM: 62

ICCAT, 2019b. 2019 Financial report, Commission 2019, 13 de November de 2019; 16:17 Doc. No. STF-202/2019 https://www.iccat.int/com2019/ENG/STF_202_ENG.pdf

ICCAT 2019c. Report of the Standing Committee on Research and Statistics, Madrid, 30 September-4 October 2019.

Hosch G. 2019. The 2018 Atlantic bluefin tuna trade scandal: the catch and trade control framework of ICCAT and how to fix it. October 2019. Available for download via ResearchGate.

ICCAT Recommendation 2019-15 establishing an ICCAT working group on bluefin tuna control and traceability measures.

3.5 WWF - Objection to PI 1.1.1a

3.5.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	1.1.1 a) stock status relative to recruitment impairment
Reason	PD2.7.2.3 b) and d) GSA2.2.3.1 Score 100 is not justified
Rationale	<p>WWF agrees with the major concern raised by the MSC technical oversight that it is not clear how SG100 is fully met e.g. high degree of certainty (95th percentile), considering the inherent uncertainties in the BFT-e stock assessment process. There are major uncertainties in the ICCAT assessments, including questions about (a.) the larval BFT index in the Mediterranean, (b.) only a single year of strong recruitment, and (c.) the impact of not including 2016 catches. Stock status in relation to reference points (including PRI/Blim, Bmsy, B0) and the current recovery status are not provided by ICCAT’s SCRS. Therefore, even the MSC default proxy indicators for PRI (see GSA2.2.3.1) cannot be analytically determined directly. The CAB themselves state that (page 130 FR) “the stock status cannot be determined (B0.1 is not quantified) with a high degree of certainty, with conclusions changed to a significant extent by the choice of model and recruitment scenario, and uncertainties in all the models.”</p> <p>Based on the points above, WWF concludes that the 95% degree of certainty determined by the assessment team that the stock is above the PRI is overestimated and cannot be accurately extrapolated based on the available data and models. Therefore, a score of 100 is not justified.</p>

3.5.2 CAB Response

CUP were surprised to receive an objection on this SI from WWF as it represents a significant change of position from WWF’s PCDR comments where no scoring change was suggested (see Final Report p. 297). No response was required from CUP at the PCDR on this Scoring Issue since no criticism was made of the scoring or rationale. (WWF submission reproduced below).

WWF Submission PCDR PI 1.1.1a (Final Report p. 297) – *‘Five different stock assessment models were tried during the stock assessment workshop in 2017 to assess the status of the Eastern Atlantic and Mediterranean bluefin tuna stock. It could be noted that all the models used by the ICCAT have issues (recruitment, poorly characterization of the fleet, etc.) but it is difficult to argue that the stock is not over the PRI (point where recruitment would be impaired) taking into consideration that the stock has*

increased in recent years and all the models indicate that the stock is over 0.5MSY point or the 20%Bo levels (default levels defined by the MSC for the PRI).

PEW in their objection support letter for WWF's objection identify this SI 1.1.1a. *'Regarding issues raised by WWF in their NoO but not in PEW's, I reiterate our support of their concerns. In particular, the CAB's scoring of PI 1.1.1(a) and PI 1.1.1(b) is flawed.'* PEW previously raised concerns at the site visit yet no comments were made on this by PEW at the PCDR stakeholder stage or at this objection. The concerns of PEW centre on the uncertainty elements which are considered in the response below.

In the reasoning for the objection above WWF cite PD2.7.2.3:

PD2.7.2.3 - The score given by the CAB in relation to one or more performance indicators cannot be justified, and the effect of the score in relation to one or more of the particular performance indicators in question was material to the determination because either:

b - The CAB failed to consider material information put forward in the assessment process by the fishery or a stakeholder.

d. The scoring decision was arbitrary or unreasonable in the sense that no reasonable CAB could have reached such a decision on the evidence available to it.

Regarding 2.7.2.3b the rationale by WWF in this objection does not identify which *'material information'* CUP failed to consider.

We assume this is in reference to the MSC Technical Oversight (Final Report p272) which we clearly consider in our response on p272 of the Final Report.

In summary, our response to the MSC Technical Oversight in the Final Report was:

- A key source of uncertainty lies in the different conclusions of the different stock assessment models used by the stock assessment group – however individually, all the models estimate that the biomass is such that recruitment is not impaired (i.e. that recruitment has been higher at lower biomass levels than currently). (This is visible in the rationale by the inspection of Figure 40.) (The SCAL model provides no significant evidence either way but trends in this model conflict with the other three and it is not used.)
- For the two models where it is possible to estimate a proxy for the PRI based on MSC's default proxies (GSA2.2.3.1) both models estimate that the biomass is above these proxy levels.

Regarding PD2.7.2.3d, CUP submit the following information identifying the relevant requirements and guidance including that raised by WWF GSA2.2.3.1 (within Table 1).

MSC requires for 'a high degree of certainty' that there is at least a 95% probability that the stock is above the PRI (SA2.2.1.3) if evaluation is quantitative. It is also permitted to evaluate this threshold qualitatively (SA2.2.1), hence it not *a priori* a barrier to scoring if reference points cannot be analytically determined, although it makes the analysis more difficult. CUP adopted qualitative evaluation for SA2.2.1.

SA2.2.1 - In P1 the terms "likely", "highly likely" and "high degree of certainty" are used to allow for either qualitative or quantitative evaluation.

SA2.2.1.3 - High degree of certainty means greater than or equal to the 95th percentile.

We can further summarise the situation for each relevant model as in Table 1. Based on this range of information, it is reasonable to reject the hypothesis that recruitment is impaired. Further, although confidence cannot be quantified across all the models, it is high, because i) within-model confidence, where it can be quantified, is high; and ii) there is no information from any of the models that contradicts this conclusion. We submit that on this basis it was appropriate, reasonable and consistent with the MSC standard to score SG100 against requirement SA2.2.1.3 based on qualitative evaluation.

Table 1. A summary of the information available to evaluate (quantitatively or qualitatively as per SA 2.2.1.3) the stock status relative to the PRI and the level of confidence associated with it. (Note: The reference points are sometimes referred to in terms of biomass (B) and sometimes in terms of spawner biomass (SB) – in practice it is SB which is used throughout so these terms are interchangeable here; we use the terms used in the relevant ICCAT reports.)

Model	Can we estimate a biomass reference point which is a proxy for the PRI, following GSA2.2.3.1?	If yes, what is the estimate of biomass relative to the proxy PRI? and with what confidence, within this model?	What does the model tell us about recruitment directly?	Is it reasonable to reject the hypothesis that recruitment is impaired, with 95% confidence or qualitative equivalent?
VPA, low recruitment scenario	B0.1 can be estimated if some assumption about recruitment is made (low vs medium vs high; recent = low); B0.1 is Bmsy proxy and 50%Bmsy is PRI proxy	The base case and all sensitivities are above B0.1, so within this model confidence is very high that B>PRI proxy (see stock assessment report Figure 50)	The base case VPA model (report Figure 12 and Figure 40) estimates recruitment and biomass. These estimates suggest that recruitment was highest at a biomass level lower than currently (1990-2005), hence the biomass at this lower level was above the point of recruitment impairment.	Across all three recruitment scenarios and extensive sensitivity runs to quantify uncertainty (see Figure 50 in stock assessment report) there were no estimates of biomass below the PRI proxy. All three scenarios put F lower than F0.1 either in 2015 (low, medium) or by 2018 (high) (see report Table 7). All runs (including sensitivities, bootstraps and jackknives) associate a lower biomass with high recruitment.
VPA, medium recruitment scenario		The base case and all sensitivities are above 50%B0.1 although not all above B0.1; within these models confidence is high that B>PRI proxy (see stock assessment report Figure 50)		
VPA, high recruitment scenario				
SS3	SBmsy can be estimated if an assumption about recruitment is made; in this case a poorly-determined SR relationship;	For 2018, SB is projected to be 85%SBmsy across all projection scenarios (TAC 10k-35k t); i.e. 1.7*PRI proxy; confidence intervals are not given	Same conclusion as VPA model (see Figure 40)	The analysis of SB/SBmsy is probably uncertain because no attempt is made to consider different recruitment scenarios (as for the VPA) and the method used to input recruitment into the model is highly uncertain. The

Model	Can we estimate a biomass reference point which is a proxy for the PRI, following GSA2.2.3.1?	If yes, what is the estimate of biomass relative to the proxy PRI? and with what confidence, within this model?	What does the model tell us about recruitment directly?	Is it reasonable to reject the hypothesis that recruitment is impaired, with 95% confidence or qualitative equivalent?
	50%SBmsy is PRI proxy			direct information about past recruitment is probably more robust and is the same as for the VPA.
ASAP	Not with the information provided	n/a	Same conclusion as VPA model (see Figure 40)	The direct information about past recruitment is the same as for the VPA.
SCAL	Not with the information provided	n/a	Nothing particular can be inferred; model estimates very high SB and different trends from the other three and should probably be discounted	Not considered further.

Turning to the specific issues raised by WWF in their comments:

3.5.2.1 Concerns specifically mentioned

WWF highlights three concerns in their comment above (one potential source of uncertainty deriving from the larval index; one potential source of concern in that recent recruitment has been mainly low; and one decision on stock assessment inputs to include catch data to end 2015). It is not clear to us why they have chosen to highlight these issues specifically since they are not the most significant. For this reason, these issues are not explicitly considered in the rationale as individual issues, but we believe that we have been clear and explicit that there are numerous sources of uncertainty deriving from a range of sources (data; choices about stock assessment inputs, structure and assumptions; differences between different stock assessment models; uncertainty in stock assessment outputs) – the question of uncertainties is discussed throughout the P1 analysis – e.g.:

- Section 3.3.1 (Biology): uncertainty in spawning sites, uncertainty in growth and maturity schedules
- Section 3.3.2.1 (Stock definition): uncertainty in the amount of separation between the two stocks
- Section 3.3.3 (Reference points): difficulty of estimating MSY and biomass reference points due to uncertainty in recruitment
- Section 3.3.4 (Recruitment): uncertainty in estimating recent and future recruitment
- Section 3.3.5 (Stock status): uncertainties in VPA model, differences between models

- Section 3.3.6 (Projections): problems with projections of biomass as opposed to F, differences between models
- Section 3.3.7 (Summary): recruitment as a source of error in projections, difficulty of comparing different sets of projections
- Section 3.3.10.3 (Data for stock assessment): uncertainties in historical catch data due to IUU, uncertainty in CPUE abundance indices due to regulatory change in the fishery, uncertainty in size data from farms, uncertainty in selection of age/growth curves, data required to improve estimates of M vector
- Section 3.3.11 (Stock assessment): Retrospective bias and unmet assumptions in VPA, summary of general sources of uncertainty in final paragraph, with reference to peer-reviewed analysis of the issue.
- Figures 12-14: Retrospective, jackknife and sensitivity analyses for the VPA, demonstrating the range of within-model uncertainty
- Figure 15: Biomass trends from all four models, showing between-model uncertainty

Hence, it is reasonable to conclude that CUP has not attempted to underplay the issue of uncertainty in relation to the assessment and management of this stock.

We address here the three individual issues raised by WWF:

Mediterranean larval index: The main discussion of this dataset relates to the ASAP model which is not extensively considered in our analysis (because it is not extensively considered by the ICCAT stock assessment group or SCRS). One of the jack-knife analyses undertaken for the VPA was to remove this data set, which resulted in a lower estimate of recent biomass, although the trends are the same. The full range of jack-knife analyses (Figure 19 in the stock assessment report) is presented in our report as Figure 13; some are more optimistic, and some are less relative to the base case. For the SS3 model, the dataset was included but its impact on model output is not discussed by ICCAT.

Recent recruitment: The stock assessment does not include estimates of actual recent recruitment, and the VPA projections assume different recruitment scenarios or 'recent' (i.e. low) recruitment, so the peak in recruitment at the end of the time series is not a driver of projections as to stock status and the impact of management. This one-off upturn in recruitment at the end of the VPA time series is much less marked in the amended version of the model (for most although not all of the retrospective runs) and as we understand it, the consensus is that it is likely to be a model artefact.

2016 catch: According to the stock assessment report, these data were not available. Projections were based on the 2016 TAC. Since the data were not available, no analysis of the impact of not including them is possible in the stock assessment report.

3.5.2.2 Stock status in relation to proxy reference points for the PRI (GSA2.2.3.1)

This is discussed extensively above and evaluated in Table 1. There is some quantitative analysis possible from the VPA and SS3, but MSC explicitly permits their uncertainty statements (likely, highly likely, high degree of certainty) to be evaluated qualitatively as well as quantitatively (SA2.2.1).

3.5.2.3 Statement by CUP on p. 150

This statement comes from the rationale for PI1.1.1b and refers to the probability that the stock is at a level consistent with MSY (B_{MSY}). It is straightforward to understand that for a given stock assessment

and uncertainty range, the probability that the stock is above the PRI (proxy 50% B_{MSY}) vs the probability that it is 100% B_{MSY} will be different.

3.5.3 References

ICCAT 2017a. Report of the Standing Committee on Research and Statistics, Madrid, 2-6 October 2017.

ICCAT 2017b. Report of the 2017 ICCAT bluefin stock assessment meeting, Madrid, 20-28 July 2017.

ICCAT 2017c. Report of the 2017 ICCAT bluefin tuna data preparatory meeting, Madrid, 6-11 March 2017.

ICCAT 2017d. Addendum to the detailed report of the 2017 bluefin tuna stock assessment session. Updates to bluefin tuna stock assessment models adopted during the 2017 bluefin tuna species group meeting. SCRS 2017/188.

3.6 WWF - Objection to PI 1.1.1b

3.6.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	1.1.1 b) stock status in relation to achievement of MSY
Reason	PD2.7.2.3 a) and d) GSA2.2.4 - Score 80 not justified
Rationale	<p>Due to the absence of Biomass indicators in the BFT stock assessment, GSA2.2.4 Scoring stock status using fishing mortality rate (F) is a prerequisite. "At least an 80 score is justified (B highly likely above the PRI and at or fluctuating around BMSY) if F is likely to have been at or below FMSY for at least two generation times (or for at least four years, if greater)."</p> <p>The Assessment team calculated a Generation time of 11 years. This Generation time differs from the results of other studies regarding Bluefin Tuna e.g. 14 years (Agnew 2011), 17 to 19 years (NOAA 2011), 20 years (ICCAT, see NOAA 2011).</p> <p>It seems that they used an inappropriate estimate for A that lead to significant lower Generation time. A is the oldest age in an unfished state and the CAB extrapolated the plus 10 age group to 20 years. No further justification for this age (20 years) was provided although reported maximum ages for bluefin tuna in the Atlantic are much higher (ranging from 30-50 years (Hurley 1983, Santamaria 2009, NOAA 2011). The CAB's calculations, and the scoring rationale based on them, are incorrect.</p> <p>With a correctly calculated GT (e.g. 14 years or higher) a score of 80 cannot be justified because the stock could not recover for at least two generation times (GSA2.2.4) respectively one generation time when F is reduced to 80% FMSY or 60% FMSY. We would like to highlight that when taking into account a generation time of 14 years the recovery time for BFT would not be 2 generation times. In case the more conservative SS3 model is used, older fish +10 years would not even have one GT to recover. Therefore the assessment team cannot demonstrate that F has been low enough for long enough to ensure that the required biomass levels are now likely to be met (SA2.2.4.1) and it cannot be concluded that stock is at or fluctuating around a level consistent with MSY.</p> <p>Schirripa, Michael J. "A literature review of Atlantic bluefin tuna age at maturity." Collect Vol Sci Pap ICCAT 66.2 (2011): 898-914.</p>

	<p>Santamaria, N., et al. "Age and growth of Atlantic bluefin tuna, Thunnus thynnus (Osteichthyes: Thunnidae), in the Mediterranean Sea." <i>Journal of Applied Ichthyology</i> 25.1 (2009): 38-45.</p> <p>Agnew 2011 CIE review report Status of Atlantic bluefin tuna (Thunnus thynnus) under the ESA),</p> <p>NOAA 2011, Atlantic Bluefin Tuna Status Review Team. 2011. Status Review Report of Atlantic bluefin tuna (Thunnus thynnus). Report to National Marine Fisheries Service, Northeast Regional Office. March 22, 2011. 104 pp.</p> <p>SCRS/2010/115 Collect. Vol. Sci. Pap. ICCAT, 66(2): 898-914 (2011) 898 A LITERATURE REVIEW OF ATLANTIC BLUEFIN TUNA AGE AT MATURITY Michael J. Schirripa1</p> <p>Hurley, P.C.F. and D.T. Isles, 1983. Age and growth of Atlantic bluefin tuna Thunnus thynnus using otoliths. p. 71-75. In E.D. Prince and L.M. Poulos (eds.) Proceedings of the international workshop on age determination of oceanic pelagic fishes:tunas, billfishes, and sharks. NOAA Tech. Rep. NMFS 8.</p>
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3.6.1 CAB Response

PEW in their objection support letter for WWF identify this SI 1.1.1b. *‘Regarding issues raised by WWF in their NoO but not in PEW’s, I reiterate our support of their concerns. In particular, the CAB’s scoring of PI 1.1.1(a) and PI 1.1.1(b) is flawed.’* No comments were made on this by PEW at the PCDR stakeholder stage.

In the reasoning for the objection above WWF cite:

PD2.7.2.3 - The score given by the CAB in relation to one or more performance indicators cannot be justified, and the effect of the score in relation to one or more of the particular performance indicators in question was material to the determination because either:

b - The CAB failed to consider material information put forward in the assessment process by the fishery or a stakeholder.

d. The scoring decision was arbitrary or unreasonable in the sense that no reasonable CAB could have reached such a decision on the evidence available to it.

Regarding 2.7.2.3 b the rationale in this objection does not identify which *‘material information’* CUP failed to consider, who it was submitted by and how this effected score of PI1.1.1b.

All rationale presented by WWF relates to Generation Time and our calculation of it. There has been no material information put forward in the assessment process by the fishery or a stakeholder in relation to Generation Time up to this point. CUP therefore we question whether this objection can be upheld on requirement PD2.7.2.3a.

Regarding PD2.7.2.3d the rationale in PI1.1.1b clearly states the relevant clauses (GSA 2.2.4, Box GSA4) which we used to determine our decision on the scoring of this SI. The decision is therefore not arbitrary, and the rationale demonstrates a reasonable decision-making process by CUP based on the evidence available. CUP therefore question whether this objection can be upheld on requirement

PD2.7.2.3d. Notwithstanding the above below we respond to WWFs objection and again show how we met the requirements of this SI.

3.6.1.1 General points about scoring 1.1.1b

Key clauses to this objection are the following:

SA2.2.4 The recent trends in fishing mortality rate may be used as a means of scoring stock status. !!

*SA2.2.4.1 -In this case, teams shall demonstrate that F has been low enough for long enough to ensure that the required biomass levels are now **likely** to be met.*

GSA2.2.4 critical guidance states - *At least an 80 score is justified (B highly likely above the PRI and at or fluctuating around B_{MSY}) if F is **likely** to have been at or below F_{MSY} for at least two generation times (or for at least four years, if greater).* [For this fishery, $F_{0.1}$ and $B_{0.1}$ are agreed proxies for F_{msy} and B_{msy} .]

As already noted, under SA2.2.1.1 MSC considers 'likely' in the context of Performance Indicator 1.1.1 as a probability of 70% or above. This statement clearly indicates that it is MSC's intent that should F be likely (70 % probability) below F_{MSY} (or $F_{0.1}$ in this case) a score of at least 80 is justified (subject to the time issue discussed below).

There is also critical guidance as given below (GSA2.2.4):

Clause SA2.2.4 also allows the use of fishing mortality as a means of scoring PI 1.1.1 when biomass information is not available. Obviously, a fishery that is currently at or below the point at which recruitment is impaired will not suddenly be at MSY if fishing mortality is reduced to FMSY.

The history of fishing mortality should be examined to determine whether the stock biomass could be assumed to be at the required level for each SG. Obviously, this depends on the starting status for stock biomass, the trajectory of fishing mortality and the length of time that fishing mortality has been at a certain level.

The following expectations should be applied if the starting biomass is unknown:

- *At least a **60 score** is justified if F is likely to have been **at or below FMSY** for at least **one** generation time of the species (or for at least two years, if greater). This level of F is generally expected to be able to recover, or maintain, a population to be "likely" above its PRI.*
- *At least an **80 score** is justified (B highly likely above the PRI and at or fluctuating around B_{MSY}) if F is likely to have been **at or below FMSY** for at least **two** generation times (or for at least four years, if greater).*
- *A **100 score** is justified if F is highly likely to have been **below FMSY** for at least **two** generation times (or for at least four years, if greater).*

Clearly these are just guidelines, based on an assumption that fishing mortality will in these cases be at or very closely below FMSY. The lower the fishing mortality has been, the shorter the time interval required for recovery. For instance, while most species require about 2 generation times to recover from the PRI to BMSY when fishing is at FMSY, when F is reduced to 80% FMSY or 60% FMSY, the time for recovery may be halved. CABs should take these issues into account when scoring.

Box GSA4 (Generation time) is not critical guidance, however it must be used to calculate the generation time (GT) in GSA2.2.4.

3.6.1.2 Approach to scoring 1.1.1b: CUP rationale

The CUP rationale follows all the requirements and guidance:

- It evaluates whether it is most appropriate to score using estimates of B vs F.
- It evaluates the estimates of F relative to $F_{0.1}$.
- It states the above guidance regarding generation time, and evaluates generation time to estimate the time periods required under the guidance (see discussion below on generation time).
- It estimates $F_{0.1}$ and evaluates the probability that F has been below $F_{0.1}$ and various proportions of $F_{0.1}$, over what time period, in relation to the generation time.
- It provides a figure which shows that under various estimates, F has been below $F_{0.1}$ over a period of ~one generation time, and demonstrates that the requirements in MSC guidance for one generation time to be considered sufficient are met.
- It sums up the arguments relating to biomass estimates, for completeness.
- It concludes that under MSC requirements SG80 is met, based on the analysis of F and MSC guidance, but that SG100 is not met.

3.6.1.3 Generation time

Regarding the references provided by WWF:

- Schirripa 2011 (cited twice in the list). This is a very nice critical analysis of the problems with different ways of evaluating age at maturity, but generation time is not mentioned.
- Santamaria et al. 2005. This is an empirical study of age and growth from the Mediterranean; it does not relate to maturity or fecundity and therefore not to generation time either. Generation time is not mentioned.
- Agnew 2011. Is a review of the paper below and therefore subject to the same issue (see NOAA 2011 below).
- NOAA 2011. As noted by WWF, this paper proposed a generation time of 17-19 years. The paper notes (p.6):

The mean generation time was similar for the two stocks because the younger age of maturity assumed for the eastern stock (which would imply a younger generation time) is mitigated by the lower natural mortality rate assumed for spawning age fish (which implies and older generation time).

This is, however, not now the case. The natural mortality schedule used for the most recent stock assessment was the same for both stocks (see Final Report Figure 8), so presumably the generation time as cited by NOAA for either one stock or the other is no longer correct. Unfortunately, as Agnew (2011 – see above) points out, the paper does not explain how generation time was calculated so it is not possible to know more.

- Hurley and Isles 1983. Aside from being very old, this relates to the western stock of BFT (not under assessment in this fishery) or at best a mixture of the two stocks (fish from the NW Atlantic) so is not relevant.

Therefore, WWF has not provided any information that CUP could reasonably have been expected to find, providing additional information on generation time for this stock; there is no useful information in these references.

3.6.1.4 Estimating generation time according to MSC FCR Guidance:

MSC provide guidance as to how to estimate generation time in the FCR V2.0 (Box GSA4). They provide two equations – a formal equation and an approximation which can be used in cases where M is in the range 0.1-2. In this case, the stock assessment does not use a single value for M, but rather an M-at-age vector. This is provided in Table 1 of the stock assessment report (reproduced in the Final Report as Figure 8). It ranges from 0.41 at age 1 to 0.1 at ages 20+, so it conforms to the requirement of M range for using the approximation. Using an average M (0.135, calculated out to max age 35) and age at 50% maturity from the maturity vector used in the stock assessment (50% maturity at 4 years), the equation gives a GT of 11.4 years:

A reasonable approximation for GT, when $0.1 \leq M \leq 2$ is

$$1/M + A_{m50}$$

where A_{m50} is the age at 50% maturity.

$$\left(\frac{1}{0.135}\right) + 4 = 11.4$$

This is the value given in the Final Report by CUP.

In responding to this objection, we also decided to evaluate GT based on the other formal equation provided by MSC:

The MSC defines a generation time as the average age of a reproductive individual in an unexploited stock, consistent with the definition in Goodyear 1995¹⁴

$$G = \frac{\sum_{a-1}^A a E_a N_a}{\sum_{a-1}^A E_a N_a}$$

where a is age, A is the oldest age in an unfished state, E_a is the maturity at age a, and N_a is the number per recruit alive at age a in the absence of fishing, i.e.,

$$N_a = N_0 e^{-Ma} \text{ where } M \text{ is natural mortality and } N_0 = 1 \text{ (per recruit).}$$

This was done in a spreadsheet or R output which can be provided on request. The result was a GT of 12 taking a modal average and GT = 13.3 taking a mean, which is not identical to the approximation (from whence the term ‘approximation’), but is similar.

We then turned to the reference cited by MSC as the source for the equation in BoxGSA4 (the ‘Goodyear equation’ on p.37 of Restrepo et al. 1998). We noticed that in this reference (given below) E_a is given as mean fecundity at age, rather than maturity as in MSC’s version (above). Substituting fecundity-at-age (approximated by weight-at-age) for maturity-at-age gives values for GT of 19.4 (mean) or 21 (mode) – i.e. close to the values put forward by WWF. However, these values are now not consistent with the values derived from the approximation provided by MSC, which previously gave a similar answer (MSC does not provide a reference for the approximation, unfortunately, but

CUP understand this was developed in-house by MSC in approximately 2010 for specific use in the MSC standard).

$$G = \frac{\sum_{a=1}^A a E_a N_a}{\sum_{a=1}^A E_a N_a},$$

where a denotes age, A is the oldest age expected in a pristine (unfished) condition, E_a is the mean fecundity at age of females, and N_a is the average number of females per recruit alive at age a in the absence of fishing, i.e.,

$$N_a = N_1 \exp\left(-\sum_{j=1}^{a-1} M_j\right),$$

The formulae provided by MSC to calculate GT, varies from that published by Goodyear 1995 and for BFT-e results in a change of ~5 years. As part of CUP's due diligence in this objection we reverted to the MSC on 06/02/2020 seeking further explanation. On the 11/02/2020 the MSC replied that they would be unable to respond to this query in relation to the objection since they cannot provide interpretations on any issue subject to an ongoing objections process. It was proposed that we should ensure that all parties in the objection are aware of this difference in the standard and that of the original equation.

3.6.1.5 Conclusion in relation to the objection and proposed course of action by CUP

To summarise:

1. CUP used the generation time equations as defined by the MSC to reach its conclusion on PI1.1.1b score, ensuring first that stated assumptions are valid. Therefore CUP made no error of procedure or scoring based on the MSC standard.
2. The GT equation reproduced by MSC in Box GSA4 is not the same as the source equation, and it is unclear what the exact MSC intent is here and whether the MSC GT approximation would still be valid using the original Goodyear equation – certainly they are no longer consistent. MSC is unable to provide any clarification while the objection process is ongoing.
3. Calculation of GT under the Goodyear version of the equation will result in an increased estimate of GT for BFT-e and may require rescoring of PI 1.1.1b.

In conclusion, in relation to the objection process specifically, CUP submits that we have acted reasonably and in compliance with MSC requirements and guidance and available information in scoring this Scoring Issue. In estimating GT, we followed a clear set of instructions provided by MSC in Box GSA4, have first established that these instructions are appropriate for the stock (i.e. that the assumption about M is met). Since the purpose of this objection procedure is not to establish how GT should be estimated, but rather to establish whether or not the CAB acted reasonably on available information, we believe that the objection should be dismissed on this basis.

However, as noted above, CUP acknowledges that under the objections process the IA should evaluate with parties how best to resolve this issue.

3.6.1.6 Final remark (outside the point of objection raised)

For the purpose of evaluating this objection we thoroughly reviewed the rationale in the Final Report and found a terminology error in SI1.1.1b. The rationale referred to $F_{0.05}$, however, this is mistaken terminology and we propose its revision in the accompanying document. In the interest of clarity we also think that the Final Report rationale suffered from having had additional material added to respond to a comment by a peer reviewer, without being fully rewritten to accommodate this new material clearly alongside the original argument. We therefore propose some edits and rearrangements to make the rationale clearer. Finally, we noticed that neither the rationale nor the figure within it (Final Report Figure 41) provided the actual estimate of $F_{0.1}$ to allow the reader to evaluate the figure for themselves – this is proposed to be added. There has, however, been no substantive change to the rationale in terms of the argument put forward, and none to the scoring.

3.6.2 References

ICCAT 2017a. Report of the Standing Committee on Research and Statistics, Madrid, 2-6 October 2017.

ICCAT 2017b. Report of the 2017 ICCAT bluefin stock assessment meeting, Madrid, 20-28 July 2017.

Restrepo VR, Thompson GG, Mace PM, Gabriel WL, Low LL, MacCall AD, Methot RD, Powers JE, Taylor BL, Wade PR and Witzig JF 1998. Technical guidance on the use of precautionary approaches to implementing National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act. NOAA Technical Memorandum NMFS-F/SPO-31, July 17, 1998.

3.7 WWF - Objection to PI 1.2.1a

3.7.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	1.2.1 a
Reason	Score 100 not justified PD2.7.2.3 d) GSA 2.4
Rationale	<p>According to GSA 2.4 Key elements of harvest strategies include:</p> <p>the control rules and tools in place, including the ability of the management system to control effort, taking into account issues such as overcapacity and its causes; the information base and monitoring stock status and the responsiveness of the management system and fleet to stock status</p> <p>We would like to highlight that:</p> <p>a) The HCR does not ensure that the exploitation rate is reduced as the PRI is approached</p> <p>b) the management plan does not include a specific provision allowing ICCAT to suspend the fishery from one year to the next</p> <p>c) Strictly speaking, the stock status is unknown. The 2017 BFT stock assessment Stock status in relation to reference points and the current recovery status are not provided by ICCAT’s SCRS. There are major uncertainties in the assessments, including questions about a) the larval BFT index in the Mediterranean, b) only a single year of strong recruitment, and c) the impact of not including 2016 catches.</p> <p>d) ICCAT’s model for the eastern bluefin stock’s assessment is unreliable because small tweaks to the input data result in substantial differences in quota advice Collette (2017)</p> <p>e) There are no pre-agreed management actions to be taken by the fisheries managers (ICCAT itself), and the simple review of the plan is not sufficient to conclude that the system is responsive to the state of the stock.</p> <p>f) A Management Strategy Evaluation (MSE) is not yet conducted</p>

	Due to these shortcomings WWF believes that requirements for 1.2.1a at SG100 is not being met ("The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in PI 1.1.1 SG80
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3.7.1 CAB Response

In the reasoning for the objection above WWF cite PD2.7.2.3d:

b. The CAB failed to consider material information put forward in the assessment process by the fishery or a stakeholder.

c. The CAB failed to consider material information put forward by the peer reviewer(s).

d. The scoring decision was arbitrary or unreasonable in the sense that no reasonable CAB could have reached such a decision on the evidence available to it.

We ask that the parties in the objection to refer to the response provided by CUP to PEW on the same Scoring Issue (Section 3.1.2) for the discussion of i) general points about scoring this Scoring Issue, and ii) our approach in relation to this fishery specifically, in relation to MSC requirements and guidance.

In relation to the specific points made by WWF (list a-f above):

a) The HCR does not ensure that the exploitation rate is reduced as the PRI is approached

We agree, but consistent with our approach to PI 1.2.1 (Section 3.1.2) this issue on the details of the HCR is scored explicitly under PI 1.2.2a not this PI. The scoring of PI 1.2.2a is consistent with WWF's point here.

b) the management plan does not include a specific provision allowing ICCAT to suspend the fishery from one year to the next

Correct. However, there is no requirement/critical guidance or guidance in the MSC standard which requires this provision as an element of a harvest strategy (e.g. in this or any other PI). Such a provision would not normally be a component of a fisheries management plan except under dire circumstances because i). for relatively long-lived species such as bluefin tuna, assuming operative monitoring (which is in place for this fishery as evaluated in PI 1.2.3), scientific perception of stock status does not change sufficiently fast to make it required; ii). it can cause economic hardship to people within the industry so would not be done unless absolutely required.

c) Strictly speaking, the stock status is unknown. The 2017 BFT stock assessment Stock status in relation to reference points and the current recovery status are not provided by ICCAT's SCRS. There are major uncertainties in the assessments, including questions about a) the larval BFT index in the Mediterranean, b) only a single year of strong recruitment, and c) the impact of not including 2016 catches.

Yes and no. Biomass reference points are difficult to estimate for this stock but estimates of fishing mortality in relation to reference points contain information about biomass in relation to reference points. Management using F and F reference points is common (for example for most fish stocks in European waters this is the standard approach under ICES (International Council for the Exploration

of the Sea). Please see discussion under PI 1.1.1a and PI 1.1.1b. The three uncertainties in the slightly arbitrary list are evaluated in our response to the WWF objection on PI1.1.1a (Section 3.5.2).

d) ICCAT's model for the eastern bluefin stock's assessment is unreliable because small tweaks to the input data result in substantial differences in quota advice Collette (2017).

The uncertainties in the stock assessment are thoroughly explored throughout our analysis (see response to WWF objective on PI 1.1.1a Section 3.5.2). ICCAT SCRS (2017) makes the point that these uncertainties are not likely to disappear and therefore management needs to be adapted to them; which was done in the process of setting the TACs for 2018-20 (see Final Report Table 8 and rationale for PI 1.2.2a).

e) There are no pre-agreed management actions to be taken by the fisheries managers (ICCAT itself), and the simple review of the plan is not sufficient to conclude that the system is responsive to the state of the stock.

It is formally agreed that management should maintain F at or below $F_{0.1}$, and management actions have been agreed consistent with this objective, including TACs and quotas through to 2020. TACs are not agreed past 2020 for the excellent reason that a stock assessment in 2020 will provide new estimates of F , $F_{0.1}$ and hence appropriate levels of TAC. Review of the management plan and measures is only one component of the harvest strategy, albeit an important one.

f) A Management Strategy Evaluation (MSE) is not yet conducted

This is true. MSC defines a harvest strategy as '*the combination of monitoring, stock assessment, harvest control rules and management actions, which may include an MP or an MP (implicit) and be tested by MSE*' (MSC – MSCI Vocabulary v1.1) [underlining by CUP]. Therefore, an MSE process is not an absolute requirement of a harvest strategy as defined by MSC at any guidepost for this SI.

3.8 WWF - Objection to PI 1.2.1b

3.8.1 Objection

Listing the relevant performance indicator(s) and using the template below, please clearly identify the reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified, ensuring you link those reasons with the applicable requirements in PD2.7.2.3 (a)-(d) of the objections procedure. Please provide your rationale and/or evidence in support of a different conclusion, making particular reference to the specific scoring guideposts associated with the particular performance indicator(s) in question.

PI (SI)	1.2.1 b
Reason	PD2.7.2.3 b), c) and d) GSA 2.4.1 - Score 80 not justified
Rationale	WWF agrees with Peer reviewer 2 that this S.I. does not meet SG80. The most recent data in the assessment is 2015 and if the "harvest strategy" is the management plan agreed to in 2018 and presently being implemented (in 2019), it is hard to say it is achieving its objectives. Increases in TAC over the next few years (including the 2018 and 2019 TACs) are based on projections. Given the uncertainties in the assessment, and uncertainties in the management implementation. It is not clear that the Harvest Strategy is achieving its objectives. The reply of the Assessment team did not sufficiently resolve these concerns. A Management Strategy Evaluation (MSE) has not yet been conducted. The end date of the stock assessment is already a few years behind (2017) and as WWF and PR2 have already clearly stated, the stock models contain large uncertainties. The HCR does not ensure that the exploitation rate is reduced as the PRI is approached and the management plan does not include a specific provision allowing ICCAT to suspend the fishery from one year to the next. GSA2.4.1 states that testing and evaluation in Scoring Issue (b) at the Harvest Strategy level should consider the full interactions between different components of the harvest strategy, including the HCRs, use of information and the assessment of stock status. It should also be noted that the objectives of the recovery plan were never confirmed as achieved. Because of the aforementioned shortcomings of the stock assessment and harvest strategy including HCRs, no evidence exists that it is achieving its objectives and therefore we do not believe that a score 80 is justified.

3.8.2 Response

In the reasoning for the objection above WWF cite PD2.7.2.3d:

b. The CAB failed to consider material information put forward in the assessment process by the fishery or a stakeholder.

c. The CAB failed to consider material information put forward by the peer reviewer(s).

d. The scoring decision was arbitrary or unreasonable in the sense that no reasonable CAB could have reached such a decision on the evidence available to it.

We ask that the parties in the objection to refer to the response provided by CUP to PEW on the same Scoring Issue (Section 3.2.2) for the discussion of i) general points about scoring this Scoring Issue, and ii) our approach in relation to this fishery specifically, in relation to MSC requirements and guidance.

The statement by WWF above that ‘no evidence exists that it [i.e. the harvest strategy] is achieving its objectives’ is untrue. The evidence required for an MSC assessment is derived from the stock assessment, stock projections and recent past performance of the harvest strategy against its objective (*maintain the biomass around B0.1, to be achieved by fishing at F0.1*) which it has done and which is equitable to SG80 for PI1.1.1 SG80, as set out in the rationale. The harvest strategy may not have been fully tested, but this is acceptable in the context of SG80.

Below we respond to the specific comments made by WWF:

3.8.2.1 Peer Reviewer 2 comments

The comment for PR2 and CUP response is provided below. Please note that PR2 confirmed that they were satisfied with the response provided by CUP (see page 3 of this document).

PR2 comment on SI1.2.1b (Final report p.243)

The CAB Report notes "ICCAT have recently moved from a rebuilding plan to a multi-annual management plan, which came into force in 2019 (Rec. 2018-02). The stated goal of Rec. 2018-02 is to maintain the biomass around B0.1, to be achieved by fishing at F0.1 (since B0.1 cannot be measured directly). B0.1 is considered to be a reasonable proxy for BMSY." SG80 criteria is: "The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives." In principle an F0.1 strategy would be sufficient in that TACs set based on that would respond to variations in recruitment. And the recent stock assessment shows $F < F0.1$ and biomass increasing. However, the most recent data in the assessment is 2015 and if the "harvest strategy" is the management plan agreed to in 2018 and presently being implemented (in 2019), it is hard to say it is achieving its objectives. Increases in TAC over the next few years are based on projections. Given the uncertainties in the assessment, and uncertainties in the management implementation. It is not clear to me that the HS is achieving its objectives.

3.8.2.2 CUP response to Peer reviewer:

It is important to note here that the MSC definition of ‘Harvest Strategy’ (HS) goes beyond the definition of ‘management plan’ as noted in the PR justification. According to the MSC a HS is the combination of monitoring, stock assessment, harvest control rules and management actions and this is defined in the rationale by the team in SI 1.2.1a. With this definition in mind as described in PI 1.2.1a the HS contains a series of technical measures; notably minimum size provisions and a series of seasons by gear, as well as a large quantity of provisions for reporting and inspections, which are believed to have led to an improved stock scenario and transformation to a management plan from the rebuilding plan. The majority of the technical measures which led to current fishery performance from the rebuilding phase remain in place within the management plan (as reviewed in Table 9).

In terms of achieving its objectives as of right now: It is correct to say that the end date of the stock assessment is a few years behind (2015) - unfortunately this is normal and unavoidable, particularly

with such a complex assessment that only takes place every few years. As summarised above, the team's interpretation of SG80 would be that the evidence available (as summarised in the rationale for 1.1.1b) supports the hypothesis that the HS is achieving its objectives - as opposed to SG100 which requires that the HS is 'clearly able to maintain the stock at target levels' (which is not met).

3.8.2.3 Time lag after stock assessment means that evidence is lacking

In the response to PEW above (Section 3.1.2), MSC's definition of 'testing' (SG80) is provided; it clearly includes simulation testing (projections). The wording of SG80 is that the harvest strategy 'may not have been fully tested' so all types of evidence included in the definition of 'testing' are not required. Under our response to PEW for SI1.2.2a (Section 3.3.2) we also quote guidance which states that an approach of implementing agreed measures, as adapted by a stock assessment only every few years is acceptable and can be considered equivalent to a dynamics HCR (i.e. one adjusted annually). It is normal for such a complex fishery that stock assessments are only conducted every few years, and for a species such as bluefin which is long-lived with low natural mortality, it is a reasonable and low-risk approach.

3.8.2.4 'It is not clear that the HS is achieving its objectives'; no MSE

The wording of SG80 (met) is: The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives. i.e. that such evidence as exists points to the conclusion that the objectives are being achieved. The wording of SG100 (not met) is: The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels. We agree that the lack of an MSE ('fully evaluated') and the uncertainties in the stock assessment and projections ('clearly able to maintain stocks at target levels') mean that SG100 is not met.

3.8.2.5 HCR reducing the exploitation rate as the PRI is approached

Please see our response to PEW under PI1.2.1 in regard to how issues around details of the HCR are approached in PI1.2.1 vs PI1.2.2 (Section 3.1.2). Please see our response to PEW under SI1.2.2a in regard to scoring the HCR in relation to this issue (Section 3.3.2). Please see our response to WWF above (PI 1.2.1a – point b, Section 3.1.2) in relation to suspension of the fishery.

3.8.2.6 GSA2.4.1 states that testing and evaluation in Scoring Issue (b) at the Harvest Strategy level should consider the full interactions between different components of the harvest strategy, including the HCRs, use of information and the assessment of stock status

The rationale mentions the HCR ($F \leq F_{0.1}$), the use of information (projections under different scenarios) and the stock assessment (base case model, uncertainties, inability to estimate B reference points). CUP could perhaps have been provided on all the different components of the harvest strategy (as per the definition given in the rationale for PI1.2.1a) but it would not change the conclusions. CUP propose an amended rationale with that detail as part of this objection. Peer Reviewer 1 complained that the rationales for Principle 1 presented too much unnecessary information which was already provided in the background section (Final Report p.232).

3.8.2.7 The objectives of the recovery plan were never confirmed as achieved

Unfortunately, the objective of the recovery plan (B_{MSY} with a probability of 60%) is not estimable by the stock assessment; hence (presumably) why the objective in Rec. 2018-02 has been changed. The 2016 SCRS report (before the objective was changed) makes the following management recommendations for BFT-e:

- The goal of achieving B_{MSY} with at least 60% probability might already have been reached or will soon be reached. Therefore, the Commission should consider adding a new phase to the current recovery plan.
- Having considered the stock indicators, the Committee advises that catches not exceeding TACs in Rec. 14-04 are not expected to undermine the success of the rebuilding plan and are consistent with the goal of achieving F_{MSY} and B_{MSY} through 2022 with at least 60 % of probability.

3.8.3 References

Rec. 2017-07. Recommendation by ICCAT amending Rec. 14-04 on bluefin tuna in the eastern Atlantic and Mediterranean.

Rec. 2018-02. Recommendation by ICCAT establishing a multi-annual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean Sea.

ICCAT 2016. Report of the Standing Committee on Research and Statistics, Madrid, 3-7 October 2016

Appendix 1. Peer Review College Response

RE: 3259 Bluefin tuna - Usufuku Honten peer review report - PCDR follow-up



PeerReviewCollege <PeerReviewCollege@msc.org>

To:  Hugh Jones

 You forwarded this message on 27/08/2019 15:49.



Tue 27/08/2019 16:48

Dear Hugh,

I'm writing to inform you that the peer reviewers have reviewed the responses to their comments in the PCDR for the Usufuku Honten Northeast Atlantic longline bluefin tuna fishery. I'd like to confirm that both PRs are satisfied with the Team's responses to the issues identified and have no further comments to add.

Kind regards,
Lisette

