



## **Harmonised Scoring, Rationales and Conditions for North Atlantic swordfish fisheries managed under the auspices of the International Commission for the Conservation of Atlantic Tunas (ICCAT)**

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### **Authors**

Macarena Garcia	Bureau Veritas
Paul Knapman	Acoura Marine
Graeme Parkes	MRAG Americas
Jose Rios	Bureau Veritas
Kevin Stokes	Acoura marine
Bob Trumble	MRAG Americas

### **Background**

This document presents the outcome of a MSC harmonisation initiative for North Atlantic swordfish fisheries managed under the auspices of the International Commission for the Conservation of Atlantic Tuna (ICCAT).

The outcomes and rationales for each performance indicator (PI) within this document represent the current harmonised position among the Conformity Assessment Bodies (CABs), as of November 2016. At the next audit, re-assessment, or new assessment of their respective ICCAT-managed North Atlantic swordfish fisheries, each CAB will adopt the outcomes and rationales given below. If new information becomes available that changes scores and scoring rationales, further harmonisation between CABs will be required. Note that it is the responsibility of assessment teams/CABs to ensure references are correct and up to date.

The MSC harmonisation initiative stems from growing concerns about inconsistent outcomes in the determinations made by CABs for overlapping fisheries during MSC assessments, which have led to complex and confusing certifications and a credibility risk to MSC.

In August 2016, MSC invited Principle 1 (P1) and Principle 3 (P3) team members from certified and in-assessment North Atlantic swordfish fisheries to participate in two-day meeting in Washington DC. The intent of the meeting was to review, discuss, score and draft scoring rationale text for each P1 Performance Indicator (PI) using the MSC Certification Requirements, version 1.3 (CR v1.3).

Stakeholders were invited by the participating CABs to submit comments and evidence prior to the meeting in order that it could be taken into account.

An independent peer reviewer with P1 expertise was appointed by the MSC Peer Review College and participated in the meeting and provided further written comment after the meeting, see Appendix 3.

Given the non-normative approach to harmonisation, the MSC's third party accreditation provider, Accreditation Services International (ASI), was present to observe and evaluate the auditability of the process.

Members of the MSC Standards Team and regional outreach staff were also present to provide guidance and answer any questions related to interpretation. An independent facilitator participated in the meeting.

On completing the P1 scoring, the opportunity was taken to review PI 3.1.3 as harmonisation on this PI had not been achieved in two previous audit cycles for the US North Atlantic Swordfish Longline and the North West Atlantic Canada Longline and the North West Atlantic Canada Harpoon fisheries.

The draft P1 scoring table and draft score and scoring rationale for PI 3.1.3 were then made publicly available and circulated to registered stakeholders for a 30 day consultation period (see [https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-west-atlantic/north\\_west\\_atlantic\\_canada\\_longline\\_swordfish/assessment-downloads-1/20160825\\_iccat\\_harmonisation\\_naswordfish\\_draft-report\\_v2.pdf](https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-west-atlantic/north_west_atlantic_canada_longline_swordfish/assessment-downloads-1/20160825_iccat_harmonisation_naswordfish_draft-report_v2.pdf)).

Following the 30-day consultation, the P1 and P3 team members reconvened remotely to review, respond and where appropriate, amend any of the scoring rationales or scores. The MSC-appointed facilitator and MSC staff also participated. Stakeholder submissions and the CAB responses are included at Appendix 4.

The final scoring rationales, scores and a condition were agreed following further correspondence and are presented in this report along with the responses to stakeholders and the peer reviewer.

### Summary of findings

Principle 1 overall score of **83.1**

#### **Tables of scores by PI for Principle 1 and for PI 3.1.3**

Prin- ciple	Wt (L1)	Component	Wt (L2)	PI No.	Performance Indicator (PI)	Wt (L3)	Score		Contribution
One	1	Outcome	0.5	1.1.1	Stock status	0.5	0.25	90	25.00
				1.1.2	Reference points	0.5	0.25	80	22.50
				1.1.3	Stock rebuilding				
		Management	0.5	1.2.1	Harvest strategy	0.25	0.125	80	10.00
				1.2.2	Harvest control rules & tools	0.25	0.125	75	7.50
				1.2.3	Information & monitoring	0.25	0.125	80	11.25
				1.2.4	Assessment of stock status	0.25	0.125	90	11.88

Three	1	Governance and policy	0.5	3.1.1	Legal & customary framework	0.25	0.125		11.88
				3.1.2	Consultation, roles & responsibilities	0.25	0.125		11.88
				3.1.3	Long term objectives	0.25	0.125	80	12.50
				3.1.4	Incentives for sustainable fishing	0.25	0.125		12.50
		Fishery specific management system	0.5	3.2.1	Fishery specific objectives	0.2	0.1		9.00
				3.2.2	Decision making processes	0.2	0.1		8.50
				3.2.3	Compliance & enforcement	0.2	0.1		9.00
				3.2.4	Research plan	0.2	0.1		8.00
				3.2.5	Management performance evaluation	0.2	0.1		8.00

#### Conditions

Condition number	Condition	Performance Indicator	Related to previously raised condition? (Y/N/N/A)
1	By December 2021, the client must be in a position to demonstrate that the SG80 requirements have been met: a) Well defined harvest control rules shall be in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached; b) The selection of the harvest control rules shall take into account the main uncertainties; c) Evidence shall be available that indicates that tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	1.2.2	Y

#### Milestones

Development of HCR under the auspices of ICCAT will require continued work by all ICCAT members. It is recognised that individual fisheries seeking to start, maintain, or renew certification have limited ability to influence outcomes at ICCAT. All decisions as to ICCAT priorities and work plans, and ultimate agreement as to new HCR, are made between member governments, with consensus required to adopt Recommendations and Resolutions. Each fishery will need to set its own milestones consistent with the harmonised condition. For simplicity, and to ensure that i) conditions and CAPs are achievable and reasonable; and ii) milestones for harmonised fisheries are consistent, milestones for each year should reflect the need for continued advocacy by clients at the national level and, where possible, jointly with other certified fisheries at the international level.

CR v2 7.11.1.4 specifies that milestones shall spell out a) The measurable improvements and outcomes (using quantitative metrics) expected each year; b) The specific timeframes over which the milestones and the whole condition must be met; and c) The outcome and score that shall be achieved at any interim milestones. HCR development in the RFMO context is dependent on RFMO priorities and work planning, typically driven by sustainability concerns. Decisions on HCR typically require a number of annual rounds of technical work and advice before the difficult stage of multi-national decision-making for adoption. Realistically, achieving SG80 scoring needs to be framed over the lifetime of the condition with flexibility as to annual expectations. With regard to 7.11.1.4, therefore, harmonised milestones are as follows:

**Year X to 2020: By the [first/second/third/fourth] annual surveillance, the Client should show clear evidence of [continued] advocacy within [country] for participation in and support of activities that support the development of harvest control rules for North Atlantic swordfish, as anticipated through ICCAT Recommendations 13-02, 15-07, and any subsequent Recommendations and Resolutions. The client should provide a full report of advocacy and other work undertaken i) with the government of [country]; ii) jointly with other certified fisheries; and iii) within ICCAT. The report should include an indication of progress towards achieving the condition in the specified timeframe and an indication of the probability of success. The milestone associated with this surveillance audit has been defined as a means to monitor progress. Meeting this milestone would not result in a change in score at this surveillance audit.**

**Year 2021: The condition should be met and re-scoring should achieve SG80.**

## Appendix 1

### NORTH ATLANTIC SWORDFISH, PRINCIPLE 1

#### RATIONALES AND SCORES

17<sup>th</sup> November 2016

Evaluation Table for PI 1.1.1

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) Y
	Justification	<p>The most recent stock assessments for North Atlantic swordfish are reported in ICCAT (2013), with status estimated as of 2011. The most recent advice on status, outlook, and management is given in ICCAT (2015) which takes account of catches since 2011 and provides status estimates for 2013 and beyond based on projections from the 2013 assessment. Three assessment approaches were used (see PI 1.2.4), with reporting on two stock production models. Multiple sensitivity tests were conducted for all assessment approaches. The base case used for reporting uses the ASPIC model with assumed Schaefer dynamics.</p> <p>The assessment results suggest that in 2011, the stock was above Bmsy with 90% probability, implying there is a high degree of certainty that in 2011 it was above the point where recruitment would be impaired, taken here as the default MSC LRP of 0.5Bmsy (CR v1.3 CR 2.3.3.3).</p> <p>The outlook statement in ICCAT (2015) clearly indicates that the stock is estimated in 2015 to have a greater than 90% probability of being above Bmsy and that at constant future annual catches of 13,700 mt, would remain above Bmsy with 83% probability over the next decade. However, if annual catches reach 15,000 mt the probability of falling below Bmsy increases to over 50%.</p> <p>Taken as a whole, in 2016, the stock is estimated to be above the point where recruitment might be impaired with a high degree of certainty. SG100 is met.</p>		
b	Guidepost		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
	Met?		(Y/N) Y	(Y/N) N
	Justification	<p>The most recent stock assessments for North Atlantic swordfish are reported in ICCAT (2013), with status estimated as of 2011. The most recent advice on status, outlook, and management is given in ICCAT (2015) which takes account of catches since 2011 and provides status estimates for 2013 and beyond based on projections from the 2013 assessment. Three assessment approaches were used (see PI 1.2.4), with reporting on two stock production models. Multiple sensitivity tests were conducted for all assessment approaches. The base case used for reporting uses the ASPIC model with assumed Schaefer dynamics.</p> <p>CB2.2.2.1 states that at SG80, there shall be evidence that the stock is at the target reference point now or has fluctuated around the target reference point for the past few years. The 2013 assessment shows that the lower 80% confidence bound of stock biomass was at the TRP, taken as Bmsy (see PI1.1.2), in 2009-10 and increased above this level in 2011 (Figure 12 ICCAT 2013). The most recent advice on status (ICCAT 2015) indicates that the stock biomass continued to increase after 2011. The stock has therefore been at or fluctuating around its target reference point for the past few years.</p> <p>SG80 requirements are met.</p> <p>To meet SG100 there needs to be a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years. CB2.2.1.3 defines a high degree of certainty as 95%. CB2.2.2.2 clarifies “over recent years” as meaning for a period longer than the past few years (the standard for SG80). The 2013 stock assessment and the 2015 update advice indicate that the stock had rebuilt from below the TRP to the TRP in 2007, and has continued to increase since then. However, the most recent estimate of biomass from the stock assessment is in 2011. The update in 2015 did not use a revised stock assessment but is based on projections accounting for catches since the 2013 assessment. A new assessment is planned for 2017. There is evidence that the stock size has been above the TRP for several years, but not with a high degree of certainty.</p> <p>SG100 requirements are therefore not met.</p>		
References		<p>ICCAT (2013) Report of the 2013 Atlantic Swordfish Stock Assessment Session. Doc. No. SCI-036/2013 <a href="https://www.iccat.int/Documents/Meetings/Docs/2013_SWO_ASSESS_REP_ENG.pdf">https://www.iccat.int/Documents/Meetings/Docs/2013_SWO_ASSESS_REP_ENG.pdf</a> ICCAT (2015) Report of the Standing Committee on Research and Statistics (SCRS) PLE 104/2015</p>		
Stock Status relative to Reference Points				
	Type of reference point	Value of reference point	Current stock status relative to reference point	

<b>PI 1.1.1</b>	<b>The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing</b>		
<b>Target reference point</b>	Bcurrent/Bmsy  Where Bmsy is model defined as 0.5K	Bmsy (2011) = 65,060 mt (+/- 80% range of 54,870-78,600 mt)	In 2011: 1.14 (+/- 80% range of 1.04-1.23) Based on Table 16 of ICCAT (2013) In 2013: Above Bmsy with 90% probability. Based on ICCAT (2015) Outlook statement
<b>Limit reference point</b>	0.5Bmsy  MSC default (CR v1.3 CR2.3.3.3)	As above	Not provided but given status relative to TRP, very high probability of being above default LRP
<b>OVERALL PERFORMANCE INDICATOR SCORE: si(a): 100; si(b): 80</b>			<b>90</b>
<b>CONDITION NUMBER (if relevant):</b>			<b>NONE</b>

**Evaluation Table for PI 1.1.2**

PI 1.1.2		Limit and target reference points are appropriate for the stock		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	(Y/N) Y	(Y/N) Y	
	Justification	<p>The key reference point used is stock biomass as a proportion of Bmsy. Bmsy is estimated analytically using a range of models subject to sensitivity testing (see PI 1.2.4) with appropriate data inputs and model fitting using a range of appropriate diagnostics. Assessments are not conducted annually but outlook updates of the stock relative to Bmsy are provided by considering projections given updated catch estimates. The reference points used are appropriate for the stock and can be (and are) estimated.</p> <p>SG60 and SG80 requirements are met.</p>		
b	Guidepost		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		(Y/N) Y	(Y/N) N
	Justification	<p>ICCAT is yet to establish by Recommendation or Resolution an explicit LRP for North Atlantic swordfish. However, CR v1.3 CB2.3.2.1 allows for the use of an implicit LRP (and TRP) for managing the stock. ICCAT (2015b) Recommendation 15-07 is on the development of HCR (see also PI 1.2.2) and includes specifications for the SCRS to advise the Commission on setting, amongst other things, LRPs for all stocks, including a 5-year schedule for the establishment of species-specific HCRs. At this stage, therefore, ICCAT planning for HCR development, including LRP, TRP and other settings, is well developed and in-train.</p> <p>Management action on North Atlantic swordfish relates to ensuring the stock is at or above the objectives laid out in the Convention; that is, Bmsy (see also PI 1.1.2). This is well exemplified in ICCAT (1999) Recommendation 99-02 which established a rebuilding program for NA swordfish when the stock was estimated to be at 0.65 Bmsy and with fishing mortality estimated as 1.34Fmsy. The Commission adopted rigorous measures (catch reductions and various technical measures) and has followed through since that time to ensure rebuilding, with the stock currently above Bmsy with a high probability (see PI 1.1.1), going beyond the rebuilding objective of achieving Bmsy with a greater than 50% probability.</p>		



		<p>The Commission introduced rebuilding measures in response to stock and fishing mortality status estimates, effectively treating either or both of those estimates as triggers, or thresholds for action. The trigger was to rebuild to meet Convention objectives but implicitly also to avoid further stock decline. These 1999 status estimates might generally be interpreted as management threshold reference points but it is not unreasonable here to treat them as LRPs which the Commission sought to avoid with a high probability by rebuilding to Bmsy within a specified timeframe and taking appropriate, sustained action to meet that goal.</p> <p>This is further emphasized by Recommendation 13-02 by ICCAT for the Conservation of North Atlantic Swordfish, which at paragraph 5 states: <i>The SCRS and the Commission shall begin a dialogue to allow for the development of harvest control rules (HCRs) for consideration in any subsequent recommendations. Further, while the HCRs are being developed, should the biomass approach the level which triggered the establishment of the previous rebuilding plan [Rec 99-02] then management measures should be considered to avoid further decline and begin to rebuild the stock.</i></p> <p>The MSC CR v1.3 CB2.3.3. paragraphs do not easily cover default reference points when Bmsy is defined by the model but not, as such, analytically determined. The common interpretation, however, for stocks other than low productivity ones, is that a default LRP of 20%B0 is adequate for SG80 scoring. The trigger level of 0.65Bmsy is by definition 33.66%B0, exceeding the MSC requirements.</p> <p>The same Recommendation (13-02), at paragraph 4, states: <i>When assessing stock status and providing management recommendations to the Commission in 2016, the SCRS shall consider the interim limit reference (LRP) of 0.4*BMSY or any more robust LRP established through further analysis.</i> This paragraph appears to specify a more explicit LRP (as 0.4Bmsy = 20%B0) but leaves open options for “more robust” alternatives even within 2016. For purposes of scoring at this time, paragraph 4 is not used, relying on the implied LRP from Recommendation 99-02 and Recommendation 13-02, paragraph 5.</p> <p>SG80 requirements are met.</p> <p>There is no explicit rationale presented in ICCAT documentation that precautionary matters (such as environmental variability, CR2.3.10), were considered when developing the rebuilding plan in 1999.</p> <p>SG100 requirements are not met.</p>		
<b>c</b>	<b>Guidepost</b>		<p>The target reference point is such that the stock is maintained at a level consistent with B<sub>MSY</sub> or some measure or surrogate with similar intent or outcome.</p>	<p>The target reference point is such that the stock is maintained at a level consistent with B<sub>MSY</sub> or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.</p>

Met?	(Y/N) Y	(Y/N) N
Justification	<p>The ICCAT Basic Texts (2007) include repeated language reflecting the preambular reference to “<i>maintaining the populations of these fishes at levels which will permit the maximum sustainable catch</i>”. Article VIII states that “<i>The Commission may, on the basis of scientific evidence, make recommendations designed to maintain the populations of tuna and tuna-like fishes that may be taken in the Convention area at levels which will permit the maximum sustainable catch. These recommendations shall be applicable to the Contracting Parties under the conditions laid down in paragraphs 2 and 3 of this Article.</i>”</p> <p>All evidence from SCRS and Commission reports, Recommendations and Resolutions, including rebuilding provisions for North Atlantic swordfish (ICCAT, 1999, Rec 99-2) supports that the ICCAT core objective follows the Basic Texts, with clear use of Bmsy as a TRP used in management decisions for swordfish.</p> <p>SG80 requirements are met.</p> <p>There is no explicit rationale presented in ICCAT documentation that the ecological role of the stock, or other precautionary matters, is considered in setting the TRP.</p> <p>SG100 requirements are not met.</p>	
d	Guidepost	For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.
	Met?	Not relevant
	Justification	Swordfish is not considered to be a Low Trophic Level (LTL) species.
References	<ul style="list-style-type: none"> <li>• ICCAT (2007) Basic Texts (5<sup>th</sup> Revision)</li> <li>• ICCAT (1999) Recommendation on Rebuilding Program for North Atlantic swordfish, Rec 99-2</li> <li>• ICCAT (2013) recommendation on the Conservation of North Atlantic swordfish, Rec 13-02</li> <li>• ICCAT (2015) Recommendation by ICCAT on the Development of Harvest Control Rules and of Management Strategy Evaluation, Rec 15-07</li> </ul>	
OVERALL PERFORMANCE INDICATOR SCORE: SI(a): 80; SI(b): 80; SI(c):80; SI(d):n/r		80
CONDITION NUMBER (if relevant):		

**Evaluation Table for PI 1.1.3**

PI 1.1.3		Where the stock is depleted, there is evidence of stock rebuilding within a specified timeframe		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	Where stocks are depleted rebuilding strategies, which have a reasonable expectation of success, are in place.		Where stocks are depleted, strategies are demonstrated to be rebuilding stocks continuously and there is strong evidence that rebuilding will be complete within the specified timeframe.
	<b>Met?</b>	(Y/N)		(Y/N)
	<b>Justification</b>	Not applicable		
<b>b</b>	<b>Guidepost</b>	A rebuilding timeframe is specified for the depleted stock that is the shorter of 30 years or 3 times its generation time. For cases where 3 generations is less than 5 years, the rebuilding timeframe is up to 5 years.	A rebuilding timeframe is specified for the depleted stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.	The shortest practicable rebuilding timeframe is specified which does not exceed one generation time for the depleted stock.
	<b>Met?</b>	(Y/N)	(Y/N)	(Y/N)
	<b>Justification</b>	Not applicable		
<b>c</b>	<b>Guidepost</b>	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within a specified timeframe.	There is evidence that they are rebuilding stocks, or it is highly likely based on simulation modelling or previous performance that they will be able to rebuild the stock within a specified timeframe.	
	<b>Met?</b>	(Y/N)	(Y/N)	

<b>PI 1.1.3</b>		<b>Where the stock is depleted, there is evidence of stock rebuilding within a specified timeframe</b>	
	<b>Justification</b>	Not applicable	
<b>References</b>			
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			<b>N/A</b>
<b>CONDITION NUMBER (if relevant):</b>			

**Evaluation Table for PI 1.2.1**

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) N
	Justification	<p>The harvest strategy consists of an objective (Bmsy), annual monitoring (of catch and CPUE) and assessment (either full or update by the SCRS) of biomass and fishing mortality and setting of TACs, catch limits, and other measures by the Commission to achieve the objective. While an explicit biomass LRP has not been defined, an implicit LRP can be inferred from rebuilding measures started in 1999 (see PI 1.1.2). The strategy of setting quotas to achieve the target biomass over the long term has maintained the stock above the MSC default limit reference point (0.5Bmsy) and has rebuilt the stock to well above Bmsy. Continued use of the strategy would be expected to ensure this continues.</p> <p>SG60 requirements are met.</p> <p>The Commission has set annual TACs consistent with the advice of the SCRS. The most dramatic example of this is the implementation of the 10-year rebuilding plan in 1999 (ICCAT, 1999) in response to SCRS-assessed declines in stock biomass. This resulted in reductions in TACs until signs of stock recovery in 2003, at which time the TACs were permitted to increase. Therefore, as the stock conditions changed, the TACs of the rebuilding plan were amended to respond to these changes.</p> <p>SG80 requirements are met.</p> <p>While the strategy is responsive to the state of the resource, it makes no explicit mention of a limit reference point (see PI 1.1.2) or how the Commission should react in a well-defined way to changes in biomass or exploitation status. While the strategy is intended to achieve the target Bmsy, it is not fully specified or designed as a clear set of rules. This is reflected by the agreement of ICCAT to develop HCR using Management Strategy Evaluation (MSE), effectively to 'design' a strategy to achieve explicit objectives reflected in specified LRP and TRP (see PI 1.2.2).</p> <p>SG100 requirements are not met</p>		

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
b	Guidepost	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	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.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) N
	Justification	<p>The SCRS carries out stock assessments based on fisheries-dependent, and provides advice to the Commission relative to Bmsy. The SCRS evaluates management measures in place and recommends changes as required to meet management objectives. In the case of swordfish, this advice has been used to set TACs and other measures. Since 1999 the stock has rebuilt and been maintained above Bmsy (see PI1.1.1).</p> <p>SG60 and SG80 requirements are met.</p> <p>There is no evidence that the harvest strategy has been evaluated. ICCAT has agreed to develop HCR using Management Strategy Evaluation (MSE), effectively to evaluate and design a harvest strategy (see PI1.2.1a).</p> <p>SG100 requirements are not met.</p>		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	(Y/N) Y		
	Justification	<p>Every three – four years, the SCRS undertakes a full assessment of the stock. This includes a review of the catch, fishery dependent indices of abundance, models of historical population size as well as biological reference points. TAC and other management measures are reviewed annually and changed as required. This process provides the monitoring to determine whether or not the strategy is working.</p> <p>The SG60 requirements are met.</p>		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			(Y/N) Y

	Justification	<p>The ICCAT SCRS reviews the elements of harvest strategy annually and provides advice to the Commission on whether the strategy has been successful and whether it needs to be changed. The SCRS has regularly reviewed and conducted stock assessments, re-estimated (re-calculated) and re-evaluated the appropriateness of the reference points, and whether the objectives of the Convention are being met. The Commission takes the advice of the SCRS under consideration and agrees binding Recommendations. Recommendations for the management of the North Atlantic swordfish stock have generally been in line with the advice from the SCRS. Neilson <i>et. al.</i> (2013) provides a detailed history of the status of the North Atlantic swordfish stock as assessed by the SCRS and management actions taken by ICCAT to recover the status of the stock, demonstrating how the harvest strategy has been modified over time following the successive reviews of its effectiveness by the SCRS. During the early 1990s when the stock status was both overfished and undergoing overfishing, ICCAT introduced a minimum size limit (Rec 90-02), recommended national quotas (Rec 94-14) and in 1995 resolved that the SCRS would develop a TAC series that allowed a 50% probability of rebuilding to the level of biomass that corresponds to MSY within 5, 10, and 15 years (Res 95-09). During the second half of the decade the stock continued to be in an overfished state, culminating in 1999 with ICCAT setting annual TACs at 10,600 mt in 2000, 10,500 mt in 2001 and 10,400 mt in 2002. By 2002, the stock status was improving, being somewhat overfished (<math>B = 95\%</math> of <math>B_{msy}</math>) but no longer undergoing overfishing (<math>F = 75\%</math> of <math>F_{msy}</math>) and ICCAT set a TAC of 14,000 mt for the years 2003–2005. The SCRS noted additional years of strong recruitment contributing to stock recovery. By 2006 the stock status had improved further to nearly recovered; <math>B</math> near <math>B_{msy}</math>; <math>F &lt; F_{msy}</math> since 2001. ICCAT extended the 14,000 mt TAC through 2008 and elected to add 2,690 mt to the TACs during the new management period, which was the unused portion of the United States quota during the 2003–2006 period. This addition brought the recommended TAC to levels that exceeded the scientific recommendations. In 2009, the status was updated to “Recovery plan achieved with <math>&gt;50\%</math> probability”, with estimated <math>B &gt; B_{msy}</math>, <math>F &lt; F_{msy}</math>; <math>MSY = 13,730</math> mt. ICCAT recommended a TAC intended to maintain the stock at or above <math>B_{msy}</math>. The TAC in 2010 and 2011 was 13,700 mt (Rec. 09-02 and Rec.10-02 respectively), just below the estimated MSY. In 2011 (Rec. 11-02), ICCAT the Commission noted the concern expressed by the SCRS that the allowable country-specific catch levels agreed to in Rec. 10-02 exceeded the 2011 TAC. In 2011 (Rec. 11-02) ICCAT set the annual TACs for 2012 and 2013 at 13,700 mt with added provisions to ensure that any overages would be deducted in subsequent years. In Rec. 11-02 ICCAT also called for the establishment at its 2013 meeting of conservation and management measures for a next three-year period (2014/15/16) on the basis of the SCRS advice resulting from the new stock assessment (in 2013) as well as the ICCAT Criteria for the Allocation of Fishing Possibilities (Rec. 01-25). In 2013 (Rec 13-02) ICCAT set the annual TACs for 2014, 2015 and 2016 at 13,700 mt. The SCRS has scheduled a new stock assessment in 2017.</p> <p>Although there is no evidence that the current harvest strategy as a whole has been evaluated in detail, the annual review and record of changes over time demonstrates that the strategy has achieved its rebuilding objectives. ICCAT has also recognised limitations in the harvest strategy and has agreed to develop an HCR to evaluate and design an explicit and more robust harvest strategy (see PI1.2.2). Therefore, SCRS is in regular discussion with the Commission to develop</p>
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PI 1.2.1		There is a robust and precautionary harvest strategy in place		
		and further improve assessment methods and evaluate reference points. The harvest strategy is periodically reviewed and improved as necessary. The SG 100 requirements are met.		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	(Y/N/Not relevant)	(Y/N/Not relevant)	(Y/N/Not relevant)
	Justification	Not relevant. CB2.5.3 states that this scoring issue shall be scored if the target species is a shark.		
References		<ul style="list-style-type: none"> <li>• ICCAT (1999) Recommendation on Rebuilding Program for North Atlantic swordfish, Rec 99-2</li> <li>• ICCAT (2015) Recommendation on the development of harvest control rules and of management strategy evaluation, Rec 15-07</li> <li>• John Neilson, Freddy Arocha, Shannon Cass-Calay, Jaime Mejuto, Mauricio Ortiz, Gerry Scott, Craig Smith, Paulo Travassos, George Tserpes &amp; Irene Andrushchenko (2013): The Recovery of Atlantic Swordfish: The Comparative Roles of the Regional Fisheries Management Organization and Species Biology, Reviews in Fisheries Science, 21:2, 59-97</li> </ul>		
OVERALL PERFORMANCE INDICATOR SCORE: si(a):80; si(b):80; si(c):60; si(d):80; si(e):n/r				80
CONDITION NUMBER (if relevant):				



**Evaluation Table for PI 1.2.2**

PI 1.2.2		There are well defined and effective harvest control rules in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Generally understood harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	
	Met?	(Y/N) Y	(Y/N) N	
	Justification	<p>The MSC Interpretation on Harvest Control Rules (HCRs) distributed to CABs on 16 December 2015, explains that “...‘generally understood’ HCRs do not need to be well defined or explicitly agreed, but there should be at least some implicit agreement supported by past management actions from which to understand that ‘generally understood’ rules exist, and there should be no reason to expect that management will not continue to follow such generally understood rules in future and act to be responsive to changes in indicators of stock status with respect to explicit or implicit reference points.”</p> <p>ICCAT has a history of taking management action to reduce the exploitation rate in the NA swordfish fishery in response to stock and fishing mortality status estimates. In 1999 ICCAT implemented a rebuilding plan under Recommendation 99-2 (see PI1.1.2) and has set TACs, catch limits, and other technical regulations regularly since that time, following advice from the SCRS, to rebuild and maintain the North Atlantic swordfish stock above Bmsy. There is no reason to expect that this management responsiveness to SCRS advice, showing status and projections in relation to indicators (see PI1.1.2), will not continue.</p> <p>In 2011, ICCAT adopted Recommendation 11-13 setting out principles of decision making for ICCAT conservation and management measures (ICCAT 2011). This describes a generally understood decision-making framework based on a harmonized format for tuna RFMO science bodies to convey advice (Strategy Matrix) agreed at the Second Joint Meeting of Tuna RFMOs in June 2009 in San Sebastian, Spain. Recommendation 11-13 guides the Commission in developing management measures responsive to stock status as represented on the Kobe Plot (a standardized “four quadrant, red-yellow-green” format, which is widely embraced as a practical, user-friendly method to present stock status information). The Recommendation sets out clearly how management measures should be designed depending on where status is estimated in the Kobe quadrants, generally codifying the type of action taken in Recommendation 99-2. In all cases, the requirement set out is that management measures should be designed to maintain the stock at, or rebuild to, Bmsy, with a high probability.</p>		

		<p>Where appropriate (overfishing and overfished) the adoption of a rebuilding plan is required.</p> <p>The framework does not specify actions with respect to approaching limits but is designed around achieving targets with high probability, considering both stock status and exploitation rate with requirements to reduce exploitation rate when it is above Fmsy. By definition, as the framework is designed to achieve the TRP with high probability and maintain fishing mortality below Fmsy, it will also act to maintain the stock above the implicit LRPs (see PI1.1.2 si(b)). This represents generally understood HCR that is consistent with the harvest strategy.</p> <p>Further, ICCAT recommendation 13-02 (ICCAT, 201b) on the conservation of North Atlantic swordfish, specifies at paragraph 5 that: <i>The SCRS and the Commission shall begin a dialogue to allow for the development of harvest control rules (HCRs) for consideration in any subsequent recommendations. Further, while the HCRs are being developed, should the biomass approach the level which triggered the establishment of the previous rebuilding plan [Rec 99-02] then management measures should be considered to avoid further decline and begin to rebuild the stock.</i></p> <p>The SG60 requirements are met.</p> <p>SG80 scoring requires that HCR be “well-defined”. Only for MSC CR v2 is there Guidance on what this means. However, interpretation of the term has been reasonably consistent through previous CR versions, including CR v 1.3, as used here. The interpretation is that to be considered well-defined, HCR must exist in some written form that has been agreed by the management agency, with clearly stated actions that will be taken at specific trigger points. ICCAT Rec 13-02, para 5, constitutes a written agreement by the management agency, filling part of the interpretation. It also includes a specification of one trigger point. It does not, however, clearly state the action(s) to be taken, referring only to a possible consideration of management measures.</p> <p>The SG80 requirements are not met.</p> <p>NOTE: A process to develop HCR using Management Strategy Evaluation (MSE) is in effect. Recommendation 15-07 (ICCAT 2015) is on the development of HCR using MSE and includes specifications for the SCRS to advise the Commission on setting reference points for all stocks, including a 5-year schedule for the establishment of species-specific HCRs. At this stage, therefore, ICCAT planning for HCR development, including LRP, TRP and other settings, is in-train. Once completed, it is possible that SG100 might be achieved at PI1.2.2(b). MSE is not a requirement to specify actions in a well-defined HCR and SG80 may in principle be achieved without it (at PI1.2.2(a) and/or (b)).</p>		
<b>b</b>	<b>Guidepost</b>		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.

	Met?	(Y/N) Y		(Y/N) N
	Justification	<p>The SCRS assessments provide the Commission with estimates of projected biomass for a range of TAC options along with the associated probability of being at or above BMSY. It has also advised the Commission on TACs that would achieve a specified probability of being at or above Bmsy (e.g. 75% in ICCAT, 2012). These probabilities are based upon the main uncertainties in the stock assessment, with consideration of alternative assessment approaches and multiple sensitivity tests (see PI 1.2.4). The HCR can therefore be considered to take account of the main uncertainties (due to data, assumptions and assessment model) in setting harvest levels.</p> <p>SG80 requirements are met.</p> <p>The HCR framework is an instruction to the Commission on how to proceed given status estimates and outlook advice from the SCRS. It naturally incorporates uncertainties due to the scientific processes but does not account for other uncertainties related, for example, to implementation error or issues not considered in the stock assessment processes, such as environmental or ecological processes.</p> <p>SG100 requirements are not met.</p>		
c	Guidepost	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) Not Scored
	Justification	<p>The Scoring Guideposts in this case are cumulative. A single narrative is used to demonstrate that SG100 would be met, although SG80 is the highest level assessed because SG80 is not met at PI1.2.2 si(a) (see CR v1.3 27.10.5.3).</p> <p>The generally understood harvest control rule is to maintain fishing mortality below Fmsy to achieve the TRP with high probability (see PI 1.2.2 si(a)). ICCAT controls fishing mortality by setting annual TACs and catch limits for each Contracting Party and Cooperating Non-Contracting Party, Entity and Fishing Entity (CPC). Recommendation 15-03 (ICCAT 2015) specified TACs and catch limits for 2014, 2015 and 2016 and an aggregate limit for this three-year management period. Should the total catch in any of the three years exceed the annual TAC, ICCAT must adjust the TAC(s) for the following year(s) to ensure that the three-year limit is not exceeded. If the total catch in the last year of the management period exceeds the TAC and the three-year total catch exceeds the aggregate limit, the exceeded amount over the three years must be adjusted in the next management period. In general, these adjustments are carried out through <i>pro rata</i> reduction of the quota for each CPC.</p>		

	<p>ICCAT relies on its CPCs to constrain domestic harvesting within each country's or entity's catch limit. In addition, minimum size regulations have been established for the Convention area. Countries can implement domestic controls above and beyond these limits to further the conservation of NA swordfish. For example, US-specific tools include fleet quotas, individual quotas, time/area closures, observer coverage requirements, VMS requirements, dockside monitoring requirements, hail in/out requirements, logbook requirements, season, transfer processes and bycatch reduction measures.</p> <p>There is evidence that clearly shows these tools used to implement the generally understood harvest control rule is appropriate and effective in achieving the required exploitation levels (ICCAT, 2009b; 2012a). While there is evidence that the catch was reduced further than required by the TAC reductions implemented as part of the rebuilding plan, the successful rebuilding of the stock to Bmsy between 1999 and 2009 nevertheless shows that these tools are appropriate and effective in controlling exploitation. The consistent decline in fishing mortality from 1999 to recent years (since when it has been stable) is shown in the stock assessment outputs (for example, Figure 8 of ICCAT, 2015a). The Commission is committed to implementing the TACs (ICCAT, 2011) and has put in place carryover mechanisms to ensure this (see above).</p> <p>SG80 requirements are met.</p>	
References	<ul style="list-style-type: none"><li>• ICCAT (2009) Supplemental Recommendation by ICCAT to amend the Rebuilding Program for North Atlantic swordfish, Rec 09-02 <a href="http://www.iccat.int/Documents/Recs/compendiopdf-e/2009-02-e.pdf">http://www.iccat.int/Documents/Recs/compendiopdf-e/2009-02-e.pdf</a></li><li>• ICCAT (2011) Recommendation by ICCAT on the Principles of decision making for ICCAT Conservation and Management Measures, Rec 11-13. <a href="http://www.iccat.int/Documents/Recs/compendiopdf-e/2011-13-e.pdf">http://www.iccat.int/Documents/Recs/compendiopdf-e/2011-13-e.pdf</a></li><li>• ICCAT (2011). Recommendation by ICCAT for Conservation of North Atlantic Swordfish, Rec. 11-02.</li><li>• ICCAT (2012a) Report of the Standing Committee on Research and Statistics (SCRS), Madrid, Spain, October 2012. 303 pp. <a href="http://www.iccat.int/Documents/Meetings/SCRS2012/2012_SCRS_R">http://www.iccat.int/Documents/Meetings/SCRS2012/2012_SCRS_R</a></li><li>• ICCAT (2013a). Report of the 2013 Atlantic Swordfish Stock Assessment Session, Portugal, 2013. Doc. No. SCI-036 / 2013.</li><li>• ICCAT (2013b) Rec 13-02</li><li>• ICCAT (2015). Report of the Standing Committee on Research and Statistics (SCRS). Spain, October 2015. <a href="https://www.iccat.int/Documents/Meetings/SCRS2015/SCRS_PROV_ENG.pdf">https://www.iccat.int/Documents/Meetings/SCRS2015/SCRS_PROV_ENG.pdf</a></li><li>• ICCAT (2015) Recommendation on the development of harvest control rules and of management strategy evaluation, Rec 15-07</li></ul>	
OVERALL PERFORMANCE INDICATOR SCORE: si(a): 60; si(b): 80; si(c): 80		75
CONDITION NUMBER (if relevant):		x

**Evaluation Table for PI 1.2.3**

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	<b>Met?</b>	(Y/N) Y	(Y/N) Y	(Y/N) N
	<b>Justification</b>	<p>There is a good understanding of stock structure (ICCAT, 2007b). On-going tagging, genetic and morphological studies have generally confirmed stock structure, indicating that it is sufficient to support the harvest strategy.</p> <p>Several studies (ICCAT, 2006) have described Swordfish growth and have been used to characterize historical trends in the catch at length in the fishery (ICCAT, 2009b), indicating that this information is also sufficient to support the harvest strategy.</p> <p>Information on growth is time invariant which does not allow for examination of production-associated temporal trends. The same appears to be the case with maturity changes. It is not therefore possible to say that information on stock productivity is comprehensive.</p> <p>Landings are generally dockside monitored and information on removals from all fleets exploiting the stock is considered adequate to inform the current harvest strategy (and future HCR development).</p> <p>SG60 and SG80 requirements are met.</p> <p>Overall, information on the fishery, while sufficient for the harvest strategy (and future HCR development), is not considered comprehensive (e.g. for growth and maturity trends).</p> <p>SG100 requirements are not met.</p>		
<b>b</b>	<b>Guidepost</b>	Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent uncertainties in the information [data] and the

	support the harvest control rule.	available and monitored with sufficient frequency to support the harvest control rule.	robustness of assessment and management to this uncertainty.
<b>Met?</b>	(Y/N) Y	(Y/N) Y	(Y/N) N
<b>Justification</b>	<p>The composition and operations of fleets involved in the North Atlantic swordfish fishery are well understood. This species is available to a large number of fishing countries due to its broad geographical distribution in the Atlantic. Directed swordfish fisheries (longline and harpoon) across the whole Atlantic include fleets from Canada, EU-Spain, United States, Brazil, Morocco, Namibia, EU-Portugal, South Africa, Uruguay, and Venezuela. The primary by-catch or opportunistic fisheries that take swordfish are tuna fleets from Chinese Taipei, Japan, Korea and EU-France.</p> <p>ICCAT requires members to report information regarding fishing activities, including catches, catches by size, effort and CPUE and biological and distributional/migration data. Recommendation 13-02 states that <i>all CPCs catching swordfish in the North Atlantic shall endeavor to provide annually the best available data to the SCRS, including catch, catch at size, location and month of capture on the smallest scale possible, as determined by the SCRS. The data submitted shall be for broadest range of age classes possible, consistent with minimum size restrictions, and by sex when possible. The data shall also include discards (both dead and alive) and effort statistics, even when no analytical stock assessment is scheduled. The SCRS shall review these data annually.</i></p> <p>Responsibility for reporting lies with the CPCs. Landings are recorded either through logbooks, dealer records or dockside monitoring. As most if not all swordfish are landed as individual fish, there is comprehensive information on the age/size composition of the landings. Reporting of catch data is reasonably up to date although there are some time lags. ICCAT (2013) reported catches up to 2012, noting that at the time of the assessment no 2012 catches were reported for eight CPCs. For these CPCs, the ICCAT swordfish stock assessment group used the average value of catches reported for 2009-2011 as an estimate for 2012 to use in the projections. This amounted to approximately a 6% increase in the reported catch of 13,134.</p> <p>Discards are estimated through observer coverage for those countries with this type of monitoring (e.g. US, Canada and Spain). Evaluations have been conducted which provide estimates of the uncertainty in these data and give guidance on the appropriate level of observer coverage. Observer coverage of the US pelagic longline fishery is consistent with NMFS guidelines (8%) and is sufficient to characterize discards. Observer coverage of the Spanish pelagic longline fishery is consistent with the recommendations of IEO scientists and the General secretariat for Fisheries (1%). Observer coverage of the Canadian longline fishery is consistent with the DFO recommended minimum coverage (5%). The SCRS reported in 2015 that several fleets have reported dead discards since 1991. The volume of Atlantic-wide reported discards has ranged from a minimum of 157 t in 2009 to a maximum of 1,139t in 2000, with 198t reported for 2014. In 2015, the SCRS expressed concern due to the low percentage of fleets that have reported annual</p>		



		<p>dead discards (in t) in recent years. Nevertheless, overall unreported landings and discards, do not appear to be significant. The uncertainties in these data are quantified through statistical models as part of the assessment process.</p> <p>Stock abundance is monitored through the SCRS assessment process (see PI 1.2.4). A number of indices of fishable biomass (from 1963) and abundance at age (from 1978) are available and are used in the stock assessment (e.g. ICCAT 2013) from a number of harvesting nations (Japan, Portugal, Morocco, Canada 1 and 2, Spain age-specific and age-aggregated, and USA 1 and 2) (ICCAT, 2013). These represent about 3 – 5 swordfish generations of monitoring. There are no fishery independent indices available so stock abundance indices are restricted to fishery dependent sources.</p> <p>The CPUE data and stock assessment support the setting of annual TACs and catch limits by ICCAT (see PI1.2.2 si(c)). Stock abundance and fishery removals are therefore regularly monitored at a level of accuracy and coverage consistent with the generally understood harvest control rule (see PI1.2.2 si(a)), and CPUE indices are available and monitored with sufficient frequency to support the harvest control rule. The SG60 and SG80 requirements are met.</p> <p>The last stock assessment was conducted in 2013 using data up to 2012. The next stock assessment is planned for 2017. Monitoring of abundance in the intervening period is based on CPUE indices. Stock estimates from the assessment are now several years old. Therefore, not all information required by the generally understood harvest control rule is monitored with high frequency and a high degree of certainty. The SG100 requirements are not met.</p>		
c	Guidepost		There is good information on all other fishery removals from the stock.	
	Met?		(Y/N) Y	
	Justification	<p>All other fishery removals from the stock comprise only IUU fishing, if any.</p> <p>ICCAT has taken significant measures to eliminate IUU fishing as indicated by Rec 2003-16 and Rec 2011-18.</p> <p>Rec 2011-18 states that “<i>IUU fishing is one of ICCAT’s most pressing problems, threatening the sustainability of the stocks and undermining ICCAT’s credibility. It affects mostly Atlantic bluefin tuna (BFT) but also other ICCAT species, including bigeye, yellowfin, and skipjack tuna, and many shark species.</i>” The Recommendation does not mention North Atlantic swordfish in the list of species affected by IUU.</p> <p>Where IUU is considered a potential problem for stock assessment, the ICCAT SCRS incorporates stock assessment runs which include estimates of unreported catch. This has not been done for North Atlantic swordfish. As part of certification assessments, the Canadian DFO (pers. comm.) and US National Marine Fisheries Service (pers. comm.) have confirmed that the SCRS has no</p>		

	<p>reason to believe there are any substantial unreported catches of North Atlantic swordfish, based on current information.</p> <p>Overall, all information on North Atlantic swordfish removals is considered good and able to support a robust stock assessment.</p> <p>The SG80 requirements are met.</p>	
References	<p>ICCAT (2003) Recommendation by ICCAT to Adopt Additional Measures Against Illegal, Unreported and Unregulated (IUU) Fishing <a href="https://www.iccat.int/Documents/Recs/compendiopdf-e/2003-16-e.pdf">https://www.iccat.int/Documents/Recs/compendiopdf-e/2003-16-e.pdf</a></p> <p>ICCAT (2006). ICCAT Manual. <a href="http://www.iccat.es/en/ICCATManual.asp?mId=4">http://www.iccat.es/en/ICCATManual.asp?mId=4</a></p> <p>ICCAT (2007). Report of the 2006 ICCAT workshop on swordfish stock structure. Col. Vol. Sci. Pap. ICCAT.61: 1 – 23. <a href="http://www.iccat.int/en/pubs_CVSP.htm">http://www.iccat.int/en/pubs_CVSP.htm</a></p> <p>ICCAT (2011) Recommendation by ICCAT Further Amending Recommendation 09-10 Establishing a List of Vessels Presumed to Have Carried Out Illegal, Unreported and Unregulated Fishing Activities in the ICCAT Convention Area <a href="https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-18-e.pdf">https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-18-e.pdf</a></p> <p>ICCAT (2013) Report of the 2013 Atlantic Swordfish Stock Assessment Session. Doc. No. SCI-036/2013 <a href="https://www.iccat.int/Documents/Meetings/Docs/2013_SWO_ASSESS_REP_ENG.pdf">https://www.iccat.int/Documents/Meetings/Docs/2013_SWO_ASSESS_REP_ENG.pdf</a></p> <p>ICCAT 2015. Report of the standing committee on research and statistics (SCRS). Spain, October 2015. <a href="https://www.iccat.int/Documents/Meetings/SCRS2015/SCRS_PROV_ENG.pdf">https://www.iccat.int/Documents/Meetings/SCRS2015/SCRS_PROV_ENG.pdf</a></p>	
OVERALL PERFORMANCE INDICATOR SCORE: si(a):80; si(b):80; si(c):80		80
CONDITION NUMBER (if relevant):		



**Evaluation Table for PI 1.2.4**

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost		The assessment is appropriate for the stock and for the harvest control rule.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		(Y/N) Y	(Y/N) N
	Justification	<p>Stock production (that is, age-aggregated) and/or age-based models are commonly used in assessments to assess stock biomass and fishing mortality in relation to reference points associated with harvest control rules. Age-structured approaches, but not stock production ones, allow a description and consideration of year-class specific processes. For North Atlantic swordfish, it is not possible to reliably age 5+ fish and, for the age groups in the fishery (less than age 5), spatial and temporal dynamics, which may vary considerably by region in the North Atlantic, further complicate an age-structure approach. These make a stock production approach an appropriate option until these issues are resolved. The SCRS uses two production approaches to provide advice to the ICCAT Commission relative to Bmsy. The assessments are appropriate for the HCR in use (see PI 1.2.2).</p> <p>SG80 requirements are met.</p> <p>While the assessment models are appropriate for the stock and HCR and consider some of the major features of Swordfish biology and the fishery, the use of the stock production model to provide harvest advice implies the lack of explicit consideration of age-specific processes (e.g. recruitment) in management advice. While this is not completely true as the SCRS has also used age-structured assessment models as a check of the production model results, harvest projections are only made based on the latter. This is further complicated by the fact that full assessments are only conducted every 3 – 4 years. This implies that interim advice provided during updates cannot benefit from information that may be available in catch and CPUE data on incoming recruitment, or consider changes in selectivity due to changes in the nature of the fishery and technical regulations.</p> <p>SG100 requirements are not met.</p>		
b	Guidepost	The assessment estimates stock status relative to reference points.		
	Met?	(Y/N) Y		

PI 1.2.4		There is an adequate assessment of the stock status		
	Justification	<p>Each assessment conducted by the SCRS for the last decade has provided estimates of current and historical biomass relative to Bmsy and current and historical fishing mortality rate relative to Fmsy. While there is no explicit limit reference point, the assessment calculates biomass relative to a number of reference points which might be adopted as limit reference points in the future.</p> <p>SG60 requirements are met.</p>		
c	Guidepost	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	(Y/N) Y	(Y/N) Y	(Y/N) Y
	Justification	<p>Major sources of uncertainty are identified in the assessment and include observation uncertainty in the combined biomass index and process uncertainty in the stock's intrinsic rate of growth, <math>r</math>, and carrying capacity, <math>K</math>. Alternate models of surplus production dynamics are also considered (SPM vs BSM). Model uncertainty is somewhat examined through comparing the results of age-structured (VPA) and age aggregated (SPM and BSM) formulations.</p> <p>Observation uncertainty is taken into account through use of a number of CPUE indices and their synthesis into a combined index through General Linear Modelling. Error in the catch and its associated proportions at age is assumed to be negligible. Process error is taken into account through consideration of alternate surplus production functions (e.g. Schaefer vs Fox) as well as uncertainty in the intrinsic rate of stock growth, <math>r</math>, and carrying capacity, <math>K</math>. It is less clear how model uncertainty is taken into account although the results of an age-structured statistically integrated model are compared to those of the age-aggregated models and narrative on this included in the assessment. In addition, retrospective analyses explore how the models perform when updated with new data.</p> <p>The SG60 and 80 requirements are met.</p> <p>The assessment, either using age-aggregated or age-structured approaches, takes uncertainty into account through examination of the implications of observation, process and model error. Retrospective analyses are undertaken to determine how the models perform when updated with new information. Key model parameters are described in probabilistic terms including the ratio of current biomass and fishing mortality to BMSY and FMSY respectively.</p> <p>SG100 requirements are met.</p>		
d	Guidepost			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			(Y/N) Y

PI 1.2.4		There is an adequate assessment of the stock status		
	Justification	<p>ICCAT (2013) explored the implications of alternative model formulations and a range of hypotheses under each model. For the two-stock production models there was a rigorous evaluation of each model while there was less time available to do the same for exploratory age structured model. Overall, noting the base case model used is a stock production model, ICCAT (2013) explored the implications of alternative model formulations and a range of hypotheses in a rigorous manner. Importantly, management advice based on the base case assessment model has been rigorously explored and estimates of trends in biomass and fishing mortality were similar across model formulations and a reasonable range of assumptions.</p> <p>The SG100 requirements are met.</p>		
e	Guidepost		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		(Y/N) Y	(Y/N) N
	Justification	<p>The assessment of the stock status is subject to peer review. Internal peer reviews of stock assessments are conducted by the ICCAT SCRS which usually meets in October of every year. Additionally, working group meetings are held within a year on an ad-hoc as needed basis. Usually these are used to prepare data and analyses prior to an assessment meeting. Once an assessment has been reviewed by the full SCRS, an executive summary is presented to the Commission.</p> <p>The SG80 requirements are met.</p> <p>The SCRS is the scientific committee within ICCAT responsible for preparing and reviewing assessments. It is composed of scientists from the countries of ICCAT. While a broad range of international expertise participates in the SCRS this is considered an internal review. External review would require ICCAT to request individuals or a group outside of the SCRS to undertake a review of assessments. While ICCAT has a process for this which has been used for other stocks, it has not been applied to Swordfish.</p> <p>The SG100 requirements are not met.</p>		
References		ICCAT (2013) Report of the 2013 Atlantic Swordfish Stock Assessment Session. Doc. No. SCI-036/2013		
OVERALL PERFORMANCE INDICATOR SCORE: si(a):80; si(b):60; si(c):100; si(d):100; si(e):80				90
CONDITION NUMBER (if relevant):				

## Appendix 2

Evaluation Table for PI 3.1.3 – Long term objectives (All UoCs)

PI 3.1.3		The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.		
Scoring Issue		SG 60	SG 80	SG 100
a	Objectives			
	Guide post	Long-term objectives to guide decision-making, consistent with the MSC Principles and Criteria and the precautionary approach, are <b>implicit</b> within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are <b>explicit</b> within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are <b>explicit</b> within <b>and required by</b> management policy.
	Met?	Y	Y	N
	Justification	<p>The long-term objective set out in Article VIII of the ICCAT Convention is to maintain the populations of tuna and tuna-like fishes that may be taken in the Convention area at levels which will permit the maximum sustainable catch. Subsequent texts have elaborated on this overarching objective. ICCAT Recommendation 11-13 sets out a series of principles of decision making for ICCAT conservation and management measures, based on the status of stocks as represented by the Kobe Plot. This applies to both Principle 1 species (swordfish) and Principle 2 species such as other tunas, marlins, and sharks, even when information is limited (see <a href="https://www.iccat.int/Documents/SCRS/Presentation/2013/Panel4-2013.pdf">https://www.iccat.int/Documents/SCRS/Presentation/2013/Panel4-2013.pdf</a>).</p> <p>Most recently, at its 2015 meeting, ICCAT adopted two resolutions which state that when making recommendations pursuant to Article VIII of the Convention, the Commission should (a) apply a precautionary approach, in accordance with relevant international standards (Resolution 2015-12[1]) and (b) apply an ecosystem-based approach to fisheries management (Resolution 2015-11[2]). The formulation of these resolutions is consistent with the UN Fish Stock Agreement and the FAO Code of Conduct for Responsible Fisheries. These and other ICCAT texts make explicit within management policy clear long term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach.</p> <p>SG80 requirements are met.</p> <p>Of the two main types of instruments used by ICCAT in implementing management policy (recommendations and resolutions), recommendations are binding on ICCAT Contracting Parties under the terms of Article VIII, however, resolutions are non-binding. In their respective preambles, Resolutions 2015-11 and 2015-12 make reference to the discussions taking place within the Convention Amendment Working Group on the incorporation of an ecosystem approach to fisheries management and a precautionary approach in the proposed amendments to the ICCAT Convention. These resolutions can be regarded as an</p>		

PI 3.1.3		The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.
		interim step pending the outcome of the Convention Amendment Working Group. In the meantime, the precautionary approach is not yet required by management policy within ICCAT.  SG100 requirements are not met.
References		ICCAT (2011) Recommendation 11-13 ICCAT (2015) Resolution 15-12 concerning the use of a precautionary approach in implementing ICCAT conservation and management measures. ICCAT (2015) Resolution 15-11 concerning the application of an ecosystem approach to fisheries management. <a href="https://www.iccat.int/Documents/Commission/BasicTexts.pdf">https://www.iccat.int/Documents/Commission/BasicTexts.pdf</a>
OVERALL PERFORMANCE INDICATOR SCORE:		80
CONDITION NUMBER (if relevant):		NA

### Appendix 3

#### Peer Review Comments and CAB Responses

Fishery Assessment Details	
<b>Fishery</b>	ICCAT Swordfisheries harmonization
<b>Peer Review College contact details</b>	xxxx
<b>Peer Review Due Date</b>	By 5 pm, GMT, 27th September 2016

#### Summary of Peer Reviewer Opinion

<i>Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?</i>	Yes/No	CAB Response
	Yes	
<u>Justification:</u> <p>As outlined more specifically below for the respective performance indicators and scoring issues, the teams' discussions and justification for making scoring determinations were thorough and provided sufficient rational for the scoring conclusions. While I noted instances for a couple of scoring issues where alternative interpretations might be equally justified, these alternative perspectives could be somewhat related to MSC's clarity of intent. The teams considered these views during their harmonization meeting based upon my initial comments at the time. I have further clarified them below for any additional consideration that may be appropriate. None would lead to materially different results in any certification status conclusion.</p>		Noted. Responses by PI, below.

<b><i>Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?</i></b> <b><i>[Reference: FCR 7.11.1 and sub-clauses]</i></b>	<b>Yes/No</b>  <b>N/A</b>	CAB Response
<u><b>Justification:</b></u> The purpose of the harmonization was to seek to align scores for relevant indicators, rather than review the appropriateness of specific conditions in each of the assessments.		

If included:

<b><i>Do you think the client action plan is sufficient to close the conditions raised?</i></b> <b><i>[Reference FCR 7.11.2-7.11.3 and sub-clauses]</i></b>	<b>Yes/No</b>  <b>N/A</b>	CAB Response
<u><b>Justification:</b></u> The purpose of the harmonization was to seek to align scores for relevant indicators, rather than review the sufficiency of the client action plan to meet specific conditions in each of the assessments.		

**Table 1** For reports using one of the default assessment trees:

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.1.1	Yes	Yes	N/A	The teams had a thorough and appropriate discussion of stock assessment results for NA Atlantic swordfish in relation to stock status criteria, including the level of certainty of being above the default LRP (.5 Bmsy) and at or above Bmsy. The justification for which SGs are met for each of the scoring issues is clear and supports the assigned score for PI 1.1.1. The question of whether stock status might be at or above the target reference point with a high degree of certainty was appropriately left to a review of the next full stock assessment expected in 2017.	Noted.



Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.1.2	Yes	Yes	N/A	The teams thoroughly discussed the appropriateness of limit and target reference points for NA Swordfish in the context of evidence from available ICCAT's Standing Committee on Research and Statistics (SCRS) and the Commission's other reports, recommendations and Resolutions. The teams appear to have correctly interpreted MSC Certification Requirements V1.3 at CB2.3.2.1 regarding explicit and implicit reference points and also outline ICCAT's established track record of using reference points to guide its management actions during and since implementation of its NA Swordfish rebuilding plan in 1999. The justification provides clear rationale for determining which SGs are met for respective scoring issues and supports the assigned score for PI 1.1.2.	Noted.

1.2.1	Yes	Yes	N/A	<p>The teams' justification for determining whether individual SGs have been met generally supports their findings. The one exception might be at Scoring Issue D related to whether "The harvest strategy is periodically reviewed and improved as necessary." On this point the teams' justification states that: "Although there is no evidence that the current harvest strategy as a whole has been evaluated in detail, the review demonstrates that the strategy has achieved its rebuilding objectives. ICCAT has clearly recognised limitations and has agreed to develop HCR using Management Strategy Evaluation (MSE), effectively to evaluate and design an explicit and more robust harvest strategy (see PI1.2.2)." This conclusion could be viewed as the teams primarily using the fact that the SCRS' annual reviews - to verify that stock status is meeting ICCAT's relevant status determination criteria - by themselves constitute a review of the effectiveness of the entire harvest strategy, which by definition has a number of contributing components. The teams did discuss back and forth whether this was sufficient rationale for meeting the SG100 at Scoring Issue D. While their final interpretation could be appropriate, a literal interpretation of the associated SG might suggest otherwise. The teams' conclusion</p>	<p>The CABs agree with the PR comments re scoring issue (d). During discussions to consider PR and public comments, the CABs agreed to strengthen the justification at PI1.2.1(d). This has been done in the final scoring table (above).</p>
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Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				might be better supported if it provided evidence how the reviews it has referenced led to improvements in the harvest strategy. Increased clarity by MSC of the intent for this scoring issue might benefit from its inclusion in a future review of its certification requirements and guidance. It seems that exemplary performance might entail explicit review of harvest strategy components as opposed to being implied by stock status outcomes.	

1.2.2	Yes	Yes	N/A	<p>The teams' justification for this PI provides clear and appropriate rational for assigning the proposed score. Scoring Issue C's SG determination is limited to SG80 based on CR v1.3 27.10.5.3 but the teams' implication is that SG100 would have been met had it not been for this limitation. While this could be a supportable interpretation of the SG 100 requirements ("Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules."), another interpretation might be that clear evidence would anticipate a review within the ICCAT process of tools used by various parties to the Commission's process to demonstrate that the respective tools themselves have been demonstrated as being both effective and effectively implemented as planned, as opposed to potentially relying upon higher level stock status outcomes to suggest the tools are clearly effective. As with a similar comment under the previous PI, these potentially different interpretations of the intent of this Scoring Issue might benefit from future review and clarification. In the case, here given MSC's scoring guidance at CR v1.3 27.10.5.3, there is no implication to the PI score assigned by the teams.</p>	<p>Noted. Given restriction to SG80 because of CR v1.3 27.10.5.3, the CABs did not consider more at this time but note further consideration would be needed should PI1.2.2 (a) be scored at SG80 in future.</p>
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Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.2.3	Yes	Yes	N/A	The teams' thorough discussion and justification provides clear and adequate rationale for assessing which SG requirements are met for each scoring issue, and for assigning the overall PI score. The justification for Scoring Issue C would benefit from providing some reference or evidence to support that IUU is no longer considered to be a significant concern and that IUU represents the only potential source of unaccounted fishing mortality among the ICCAT parties or within its jurisdictional area.	Noted. The CABs have given further consideration to scoring issue (c) and have redrafted the rationale.
1.2.4	Yes	Yes	N/A	The teams' discussions and justification for the various scoring issues under this PI, which is designed to assess the adequacy of stock assessments for determining status, were very thorough and support the scoring decisions reached.	Noted.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
3.1.3	Yes	Yes	N/A	Since MSC's SG100 specifies both an explicit and required precautionary approach, the teams' inclusion of reference to Clauses 1, 2, and 3 of Article VII of the ICCAT convention is helpful to clarify the 'force' of ICCAT's adopted Resolution 2015-12, which uses the word 'should' as noted by the team. Thus, the teams' justification provides adequate rational for the assigned score.	Noted. Subsequent to the harmonization meeting, CABs discussed further and amended the justification and scoring to SG80 (see above).

## Appendix 4

### STAKEHOLDER SUBMISSIONS DURING PUBLIC CONSULTATION PHASE

(Responses from assessment teams in red)

#### COMMENTS FROM THE NOVA SCOTIA SWORDFISHERMEN'S ASSOCIATION

Assessment Stage	Fishery	Date	Name of Individual/Organisation Providing Comments
<input checked="" type="checkbox"/> Public review of the draft assessment report <sup>1</sup> Opportunity to review and comment on the draft report, including the draft scoring of the fishery.	N. Atlantic Swordfish fisheries	21/09/16	Troy Atkinson (NSSA)

☒

I wish to comment on the evaluation of the fishery against specific Performance Indicators.  
*A table with these indicators and the scores and rationales provided by CABs can be found in Appendix 1 of the draft assessment report.*

**Nature of comment** *(Please insert one or more of these codes in the second column of the table below for each PI.)*

- I do not believe all the relevant information<sup>2</sup> available has been used to score this performance indicator *(please provide details and rationale).*
- I do not believe the information and/or rationale used to score this performance indicator is adequate to support the given score<sup>3</sup> *(please provide details and rationale).*

<sup>1</sup> [MSC Fisheries Certification Requirements, v2.0 section 7.15](#)

<sup>2</sup> [MSC Fisheries Certification Requirements, v2.0 section 7.10](#)

<sup>3</sup> [MSC Fisheries Certification Requirements, v2.0 section 7.10](#)

3. I do not believe the condition set for this performance indicator is adequate to improve the fishery's performance to the SG80 level<sup>4</sup>  
(please provide details and rationale).
4. Other (please specify)

Performance Indicator	Nature of Comment Indicate relevant code(s) from list above.	Justification Please support your comment by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.
PI 1.2.2(a)	1	<p>I would like to submit stakeholder comments regarding the NA Swordfish Harmonization Pilot specific to the conclusion drawn with respect to PI 1.2.2.(A)</p> <p>The group concluded as follows with respect to the SG80 Guide Post:</p> <p>"ICCAT has not yet established well-defined HCR for NA swordfish but a process to develop HCR using Management Strategy Evaluation (MSE) is in effect. Recommendation 15-07 (ICCAT 2015) is on the development of HCR using MSE and includes specifications for the SCRS to advise the Commission on setting reference points for all stocks, including a 5-year schedule for the establishment of species-specific HCRs. At this stage, therefore, ICCAT planning for HCR development, including LRP, TRP and other settings, is in-train, but a well-defined HCR cannot be said to exist, as required for SG80.</p> <p>The SG80 requirements are not met."</p> <p>In my submission for this meeting, I included the following link:  <a href="https://iccat.int/Documents/Recs/compendiopdf-e/2013-02-e.pdf">https://iccat.int/Documents/Recs/compendiopdf-e/2013-02-e.pdf</a>  and specifically referenced paragraph 5, showing that ICCAT has adopted an HRC specific to the established LRP:</p>

<sup>4</sup> MSC Fisheries Certification Requirements, v2.0 section 7.11



Performance Indicator	Nature of Comment Indicate relevant code(s) from list above.	Justification Please support your comment by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.
		<p>5. The SCRS and the Commission shall begin a dialogue to allow for the development of harvest control rules (HCRs) for consideration in any subsequent recommendations. Further, while the HCRs are being developed, <u>should the biomass approach the level which triggered the establishment of the previous rebuilding plan [Rec 99-02] then management measures should be considered to avoid further decline and begin to rebuild the stock.</u></p> <p>The second sentence of this paragraph specifically states “Further, while the HCRs are being developed, should the biomass approach the level which triggered the establishment of the previous rebuilding plan [Rec99-02] then management measures should be considered to avoid further decline and begin to rebuild the stock.”</p> <p>The inclusion of this sentence defines specific action that will be taken if the biomass level approaches the level that triggered the previous rebuilding plan, which is the LRP defined in paragraph 4 of this same document.</p> <p>It seems that this portion of the paragraph has been overlooked and has not been considered for what it states and in my view, those involved in the Harmonization process have been caught up in the MSE process that will follow and have overlooked what is already in place in anticipation of “something better” coming down the road.</p> <p><b>CAB COMMENT:</b></p> <p>The CABs considered this information in the original meeting and have reconsidered it after the public comment period. The draft rationale, however, did not reference it – this was an oversight that has been corrected in the revised text (above). The issue raised by the NSSA is critical and relates to an issue that causes considerable difficulty. The MSC has provided various interpretations and guidance related to HCR, with the latest being available in the Guidance to CR v2. That Guidance includes “...‘well-defined’ HCRs in these cases would be expected to explicitly include the conditions under which the technical measures in the fishery would be expected to be revised in the future.”, and ... HCRs should</p>

Performance Indicator	Nature of Comment Indicate relevant code(s) from list above.	Justification Please support your comment by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.
		<p><i>be regarded as ‘well-defined’ in the sense required to achieve an 80 score when they exist in <u>some written form that has been agreed by the management agency</u>, ideally with stakeholders, and <u>clearly state what actions will be taken at what specific trigger reference point levels.</u>”</i></p> <p>ICCAT Rec 13-02 is a written agreement by the management agency, going some way to meeting the “well-defined” test. It also includes a trigger point. However, it does not “clearly state what actions will be taken”, only stating that “management measures should be considered to avoid further decline...” The intent is clear but specific action is not included and the consensus view of the CABs/assessors undertaking harmonisation, agreed by the peer reviewer, is that SG80 is not met.</p> <p>The SCRS (scientific wing of ICCAT) has proceeded with MSE for Northern Albacore Tuna and has contracted someone to develop an operational model for bluefin tuna. MSE in it’s true form is a considerable time off. The intent of the SCRS is to develop operational models for various stock to aid in projecting future stock status under various scenarios, including management options and environmental factors. This process has not yet had any management involvement and in its current form is a scientific exercise only. I fear that the view of those involved in the harmonization process is that what is coming is a set of specific management outcomes that will be put into place automatically once a specific scientific outcome is reached. Having spent 15 of the last 18-years attending ICCAT as part of the Canadian delegation, I would be extremely surprised if, during the course of our next recertification period, that MSE for North Atlantic swordfish would progress to the level that is anticipated by the Harmonization team. I think it is necessary that they truly consider the HRC that was adopted in 2013 and outlined in paragraph 5 of Recommendation 13-02 before final scores for this PI are adopted.</p> <p>The circulated text for public comment was misleading. The CABs did not intend it to imply that MSE was a prerequisite of achieving an SG80 score. Indeed, well conducted MSE leading to adopted HCR would possibly allow</p>

Performance Indicator	Nature of Comment Indicate relevant code(s) from list above.	Justification Please support your comment by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.
		<p>SG100 scoring. The text was included to note agreed work already in train, though it does not affect scoring. The revised rationale text clarifies why SG80 is not given (see above) and now includes the comment on MSE only as a note. The CABs apologise for any confusion.</p> <p>Regards, Troy Atkinson, Nova Scotia Swordfishermen's Association</p>

## COMMENTS FROM THE ECOLOGY ACTION CENTER

September 30<sup>th</sup>, 2016

### **EAC Submission on Draft Outcomes of MSC Harmonization Meeting for NA Swordfish Fisheries under ICCAT**

We are pleased to have the opportunity to comment on the Harmonization Report of NA Swordfish fisheries certifications and scoring tables therein.

It is important to recognize this harmonization pilot is precedent setting in terms of how MSC's standard will be applied to RFMO managed fisheries around the world. The rationale given for scoring must be thorough and clear, since CBs from around the world will look to this pilot to guide their scoring of RFMO management and performance in the future. It is with this in mind that we have scrutinized the scoring rationale and justifications used.

We engage as a stakeholder in MSC policy improvements and certification assessments in order to help ensure the MSC objective of improving fisheries sustainability is realized. Rather than simply rewarding fisheries for achieving status quo, MSC can be a lever to effectively raise the bar.

We recognize that it is a difficult process to balance scoring for fisheries that are ultimately managed at the RFMO level. We also recognize that fisheries clients do not have full control over decision making at RFMOs and can therefore face challenges meeting conditions. However, since MSC has set its standard to include the RFMO level in its scoring of management, it is important that even ICCAT decisions are held to the MSC standard for certification purposes. Thus, we urge MSC and the CBs involved to be thoughtful about decisions made during harmonization process as there are implications for the application of the standard and for the future of MSC's relationship to RFMO managed fisheries.

We have attended ICCAT for the past seven years as the only Canadian civil society observer and we are very familiar with the body and its procedures. It is ultimately a political body and the decision making is fraught with the uncertainty that comes with international negotiations. Until a recommendations passed it is not a binding decision and there have been many instances where the plenary has not found consensus, has acted against science advice, and has delayed progress on management.

While RFMOs can be slow to adopt and implement measures creating situations where the timelines of RFMO decision making does not meet certification timelines, we must be careful to ensure the MSC certification standard remains an incentive for action rather than the standard allowing for exceptions when things move too slowly.

The CABs note the concerns expressed by the EAC re MSC certification of fisheries managed by RFMOs and recognize difficulties being faced in multiple regions. We are sensitive to the issues and are aware that they are under constant consideration by the MSC, stakeholders and CABs. For this harmonization, we have attempted to apply best practice, cognizant of assessments on other RFMO-managed fisheries, but in line with the MSC CR, interpretations and guidance.

#### **Performance Indicator 1.1.2**

The rescoring of the Scoring Issue B resulted in the overall PI rescoring at 80 and the closure of Condition 1 for all fisheries. As this harmonization pilot is precedent setting, we feel that it is very important for MSC to ensure that their established procedures for closing conditions is followed and

the rationale used is clear and robust. We have two areas of concern about scoring not adequately justified in the report write up: the rescoring of 1.1.2b leading to the closure of the condition and the closure of this condition without the achievement of the final milestone by the clients.

### **Sib revised scoring rationale**

We do not think that the revised rationale supports the change in scoring of this indicator. The rationale acceptably justifies the recognition of 65 percent of Bmsy or about 33% of virgin biomass as an implicit LRP used to trigger the rebuilding plan put in place in 1999. The original rationale in each fishery assessment also found there to be acceptable implicit LRP in place.

However, this was not the reason given for not meeting 80 in Sib. in the original scoring of the fisheries. All of the assessments noted that while it is *likely* the implicit LRP it was “uncertain” (Canadian SWO, LLC SWO) or “very uncertain” (Dayboat). The MRAG 2013 assessment of Day Boat Seafood goes on to say, “additionally, these reference points have not been formally adopted so it is unclear whether they would be used in management.” It is for this uncertainty that the score of 80 was not met.

These parts of the original scoring rationales have been omitted from the report’s revised rationale without explanation.

Part of the uncertainty and concern remains since ICCAT has yet to adopt explicit LRP. The commission has pushed the goal posts on this work a number of times. There is no evidence that they will not continue to push the decision making back. It is important to hold ICCAT accountable when it does not achieve its timelines. Recommendation 2010-02 was used in the original assessment of Canadian NW Atl Swordfish to justify the CBs confidence that Condition 1 would be fulfilled during the certification period. The recommendation states:

6. In advance of the next assessment of North Atlantic swordfish, the SCRS shall develop a Limit Reference Point (LRP) for this stock. Future decisions on the management of this stock shall include a measure that would trigger a rebuilding plan, should the biomass decrease to a level approaching the defined LRP as established by the SCRS.

The latest stock assessment was completed in 2013, however no LRP was adopted by the commission, instead an interim LRP was adopted. In 2015, recommendation 15-07 started a new process for setting reference points and harvest control rules that will take another number of years. We recognize the difficulties fishery clients face trying to influence the ICCAT process or move it forward in order to meet conditions of MSC certification. However, It is clear that MSC certification has acted a one, amongst other, levers of pressure to improve ICCAT. We see evidence of this, as noted in the scoring rationale of PI 3.1.3, in the explicit resolutions to apply the precautionary and ecosystem approaches.

The CABs have taken the approach of rationalizing and scoring afresh, using CR v1.3. The scoring is not an update or an audit of previous scoring. The SG language is clear that the requirement is for the existence of an LRP, and CR v1.3 CB2.3.2.1 makes clear that any LRP (or TRP) may be implicit or explicit. Issues of uncertainty of status with respect to RPs are covered at PI 1.1.1. Issues of uncertainty as to whether or how management will respond are not covered in the SG at PI 1.1.2. Implementation issues and effectiveness, including dealing with uncertainty, are covered at PI 1.2 and in P3. Because management actions since adoption of the implicit LRP have all resulted in the fishing mortality remaining below Fmsy and biomass rebuilding and stabilizing above Bmsy, there

has been no test of whether or not the implicit LRP would in practice trigger management action. The implied LRP has, however, been reaffirmed in Recommendation 2013-02, paragraph 5.

It is therefore, important at this stage of rolling out harmonization processes for MSC to consider how the CBs rationale and scoring justification is made, especially when closing a condition whose milestones were not achieved due to ICCAT failing to fulfill its own recommendations. The precedents set in this pilot may influence and guide similar processes with certification harmonization of RFMO fisheries.

We would ask for a fuller justification in the scoring rationale that addresses how the uncertainty or concerns with ICCAT not using the reference points (even interim or implicit ones) in management practice has changed since the original assessments of these fisheries. This is especially important, as ICCAT does not have the best track record when it comes to following scientific advice consistently across species. The scoring rationale rests largely on assuming that the past actions taken by ICCAT during the rebuilding plan will be continued into the future.

Please see above. The scoring rationale at PI 1.1.2 (b) has been expanded to explain better the recognition of an implicit LRP consistent with MSC CR v1.3 SG80. The issue of uncertainty as raised by EAC is not included in the SG or in CR v1.3 text and Guidance.

#### **Closure of Condition 1**

The scoring change of 1.1.2 Sib to 80 closes Condition 1 for all the fisheries despite the fact that the fisheries have not achieved the final milestone of this condition. The condition was:

By the 4<sup>th</sup> surveillance audit, evidence must be provided to show that the Limit Reference Point (LRP) is set above the level at which there is an appreciable risk of impairing reproductive capacity for the North Atlantic Swordfish stock.

The final milestone (year 3 for some clients, year 4 for others):

NW Atlantic Canadian:

By the fourth surveillance audit the client must provide evidence to indicate that the SCRS has developed an appropriate LRP for North Atlantic swordfish, as requested by ICCAT and that the LRP has been implemented and is set above the level at which there is an appreciable risk of impairing reproductive capacity for the North Atlantic Swordfish stock.

Provided the actions defined in the milestones and the deliverables in the client action plan are met, the PI would likely be re-scored at 80 or higher.

North Atlantic U.S. Swordfish Pelagic Longline and Headgear Buoy Line Fishery:

Prior to recertification, the SG80 scoring requirements must be met in full. ICCAT must adopt an explicit LRP for the North Atlantic swordfish stock. This LRP must be set above a stock biomass (t) at which there is an appreciable risk of recruitment being impaired. The client will submit evidence that this is the case. At this point, the fishery will score at least 80 for PI 1.1.2.

US North Atlantic LLC:

By third annual audit, the client must provide evidence that the LRP has been implemented and is set above the level at which there is an appreciable risk of

impairing reproductive capacity for the North Atlantic Swordfish stock. If this milestone is met, the fishery will be rescored at  $\geq 80$ .

Each milestone explicitly states that the LRP must have been implemented and it is only once this milestone is met that the fishery will be rescored. It is clear that despite the proposed decision to change the scoring of this SG, the requirement of the milestone has not been met.

It is an important for maintaining consistency in the MSC standard that there is clear and explicit rationale to justify closing a condition when the milestone has not been met. What are the implications for the standard when milestones are not met?

This is a procedural issue also since the specific wording of the condition was put in place as an outcome of the Ecology Action Centre's objection to this fishery certification. The CB had to create clear conditions and milestones that met the Methodology guidance of the time. Part of our concerns raised in the objection was the likelihood that the condition was not something that could be met in the certification timeline due to inaction at ICCAT. The accepted response by the CB was that 'we cannot prejudge the outcomes' progress and full completion would be assessed during audits and if the fishery was unable to meet the condition, the MSC process would be followed. However, we now see a closure of a condition that was not fully met without proper justification.

This rationale, not just the rescoring rationale, needs to be included in this harmonization report since it is at this meeting that the decision to close the condition was taken. While the milestones progress and decisions to closed conditions are usually addressed in the individual fishery audits, it does not make sense to wait until the audits to address this serious process point. As stated in our comment above, our concern is about ensuring MSC has considered the future implication of decisions taken in this pilot harmonization project that will impact certification of RFMO fisheries around the world.

The harmonization is for P1 scoring and, where an SG is less than 80, setting harmonized conditions and milestones. The harmonization process and resulting justifications and scoring may have implications for closing conditions (as at PI1.1.2 (b)) but it is the audit process for each certification that needs to deal with the matter appropriately. This harmonization report does not address the issue as raised by EAC.

### **Performance Indicator 3.1.3**

Following the circulation of the draft scoring and rationale for PI 3.1.3, the CABs undertaking harmonization reconsidered this PI and amended the score to SG80, using an updated rationale. The updated rationale makes the clear distinction of force between ICCAT recommendations and resolutions, as does the EAC submission. We note, however, that the CAB justification for not scoring SG100, consistent with the SG text, relates to the distinction between ICCAT Recommendations and Resolutions rather than to the lack of evidence of application, which the EAC regards as a requirement to achieve the SG100.

Our concern lies in this case with the scoring rationale used to justify a score of 100 for this guidepost. Again, as noted above, we would like to ensure that MSC and the CBs are very cautious with wording and scoring justifications in this pilot harmonization in light of the future guidance it may lead to.

Given ICCAT Resolutions 2015-11 and 2015-12 a score of 80 is now justified as stated in the scoring rationale. However, concerns noted by the CBs in the original assessment of the fisheries related to the evidence of application of the precautionary and ecosystem approaches are not addressed in the revised rationale. We argue that without this evidence of application a score of 100 cannot be achieved.

Each original assessment of 3.1.3 of these fishery clients states:



The explicit application of the precautionary approach as a matter of high level policies required for a score of 80 or more is lacking for ICCAT. **Furthermore, the precautionary approach should be applied to decisions associated with both principles 1 and 2.** ICCAT has been slow to respond to uncertainty information on the status of some stocks under its jurisdiction. In the candidate fishery, there is **little evidence of the application of the precautionary approach in the face of uncertain scientific information on the potential threat to vulnerable species (e.g., sea turtles, sharks) posed by longline bycatch.** (emphasis added)

It is important to ensure that improvements are not merely paper improvements, but that policies actually translate into management actions. It should be noted that these were ICCAT Resolutions and are, therefore, not binding as a Recommendation would be. They were passed only as resolutions due to the opposition, on the record, of some countries at ICCAT to enshrine these approaches. This is concerning and creates further uncertainty that the precautionary and ecosystems approach will be operationalized in management decisions.

To date, ICCAT still does not have a strong record of applying the precautionary or ecosystem approaches in their management decisions or recommendations. This has been the case for tuna species, bill fish, and especially in the case of shark catch and turtle bycatch. We would like to see at most partial scoring to 90 for this SG with a rationale that discusses evidence of application of the approaches.

Having clear scoring rationale is especially important in this case as it closes a condition.

As MSC continues to certify ICCAT managed fisheries, the credibility of the standard will be tested. The objectives of MSC will only be met if we can ensure fisheries actually apply best practices for sustainability on the water and in management decisions and do not get away with paper changes only.

We look forward to a reply on the above concerns from the harmonization working group. Since many of our points speak more broadly to the future of the standard and broader impact of this pilot, it would also be good to hear how MSC is approaching these challenges as they continue to refine their theory of change.

Sincerely,



Shannon Arnold  
Marine Policy Coordinator  
Ecology Action Centre