



Form for issuing a Notice of Objection

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1.Introduction

The MSC Objections Process

The MSC Objections Process provides an orderly, structured, transparent and independent process by which stakeholder or client objections to the Final Report and determination of a certifier (or Conformity Assessment Body) can be resolved.

The Objections Process is not intended to review the fishery against the MSC fisheries standard, but to determine whether the certifier (CAB) made an error of procedure, scoring, or condition setting that is material to the determination or the fairness of the assessment.

[Learn more about MSC Objections >](#)

[View the Objections Flowchart >](#)

Simplification Pilot Process

This template has been adapted from the default 'Notice of Objection Template' for piloting a revised assessment process. This project aims to simplify the assessment process – reduce complexity and cost, whilst improving effectiveness of stakeholder engagement and maintaining credibility.

[Read more about the simplification pilot process >](#)



2. Your details

2.1. Contact details for objecting party

Contact Details		15 February 2018
First Name*	Iris	
Last Name*	Ziegler	
Title	Dr	
Organisation Details		
Organisation*	SHARKPROJECT Germany e.V.	
Department	Internationale Initiative zum Schutz der Haie und der marinen Ökosysteme	
Job Title*	International Co-operations	
Description	International initiative for the protection of sharks and marine ecosystems	
Mailing Address	Ottostrasse 13, D-63150 Heusenstamm, Germany	
Phone	+49 162 138 106	
Email*	i.ziegler@sharkproject.org	
Assessment Details		
Fishery Name*	Echebatar Indian Ocean Skipjack fishery	
Certifier (CAB) *	Acoura Marine	
The following objection is being lodged on behalf of the below named organisation(s) and I am authorised to make this submission on their behalf.		

Signature*	 (Dr. I. Ziegler)
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2.2. Objecting party's credentials

Prior Involvement		15 February 2018
Please indicate your prior involvement with this assessment		
Fishery client – PD2.3.1.1		<input type="checkbox"/>
Written stakeholder submissions - PD2.3.1.2		<input checked="" type="checkbox"/>
Meetings attended - PD2.3.1.2		<input type="checkbox"/>
Participation prevented or impaired - PD2.3.1.3		<input checked="" type="checkbox"/>
Evidence		
Please note that Objections can only be raised on a topic if you have previously raised the issue during the initial assessment stages i.e. announcement and site visit periods (See Simplification Pilot Process). See Annex PD, Clause 2.3.1 for more information on who can raise an objection.		
Supporting evidence of prior involvement to indicate that you raised this topic previously.	<p>SHARKPROJECT submitted comments on the Second Report (see 281 of Final Report v2). Our comments were not as detailed or substantial as we'd have liked but we are a small NGO with limited resources and the person responsible for MSC engagement was on holiday for much of the limited time allowed for stakeholders to respond. We requested, but were denied, an extension.</p> <p>We requested, and the CAB provided, (although only at the last minute - see below) some of the raw Observer data on catches - an Excel spreadsheet of catches by set and by vessel for 2016.</p>	

Background	<p>SHARKPROJECT is an international campaigning organisation founded in 2002 with offices in Germany, Austria, and Switzerland. SHARKPROJECT Germany was founded in 2008 with the aim of supporting the international goals and campaigns of SHARKPROJECT at a national level in Germany.</p> <p>SHARKPROJECT campaigns for the protection of sharks and the marine ecosystem.</p>
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3. Your Objection

3.1. Categorisation of Objections

Objection category	15 February 2018
Are you objecting on the basis that, in your opinion...	
<p>There was a serious procedural or other irregularity in the fishery assessment process that was material to the fairness of the assessment – PD2.7.2.1 Complete Section 4</p>	X
<p>The setting of conditions by the certifier (CAB) in relation to one or more Performance Indicators cannot be justified because the conditions fundamentally cannot be fulfilled, or the condition-setting decision was arbitrary or unreasonable in the sense that no reasonable certifier (CAB) could have reached such a decision on the evidence available to it – PD2.7.2.2 Complete Section 5</p>	X
<p>The score given by the certifier (CAB) in relation to one or more of the Performance Indicators cannot be justified, and the effect of the score in relation to one or more of the particular Performance Indicators in question was material to the determination - PD2.7.2.3, Section 6</p>	X

Additional information not forming part of the record (as defined in [PD2.6.5.1](#)) that is relevant to the circumstances at the date of determination has not been considered - [PD2.7.3, Section 7](#)

X

4.Process

4.1.Objection in line with [PD2.7.2.1](#)

Please ensure you have filled in your [contact details \(Section 2\)](#) and [objections category \(Section 3\)](#) before filling in this section.

Content	
Please identify...	
Procedural issues 4.1	<p>It is difficult to know where procedures were correctly followed, as this pilot version of the assessment process has different rules which appeared flexible at some points (e.g. increasing feedback time for stakeholders following the release of the desktop report; allowing CAB to withdraw, correct, and repost the Final Report v2) but inflexible at others, such as refusing requests for extensions from stakeholders with few, if any, staff able to review and respond to reports in the timeframes given.</p> <p>We do not have time or resources we would like to read the Final Report and respond in the detail we'd like, let alone read through all the accompanying rules and regulations. For this reason we have focused on scoring issues only on Principle 2 regarding major species (yellowfin), ETP species, especially sharks, and on FAD impacts. Lack of comments on the scoring of any other PIs should not be taken as agreement with them.</p> <p>We hope in view of all this that the MSC and IA allow some flexibility in this final Objection process.</p>

Other	<p>We appreciate that the new procedures and timelines imposed by the MSC for this assessment under the pilot simplification process were difficult for all involved - time limitations especially were mentioned as was raised by the CAB, the peer reviewers (e.g. PR B, page 318) and many stakeholders in meetings and their written responses.</p> <p>However the CAB did not make this any easier for us. Releasing the Second Report for comment on 18th August, during peak northern hemisphere summer holidays was not very sporting for a start.</p> <p>On 6th September 2016, during the stakeholder response period for the Second Draft Report, SHARKPROJECT requested the 2016 observer data for Echebatar vessels that was available from AZTI, in order to get a better understanding of the significant increase in bycatch that was apparent from new data provided since the Certifier Desk Review report.</p> <p>Billy Hynes replied on 7th Sept that the Assessment team would send this by the following day but it was not provided until 12.24pm on 11th September - just 1 day before the stakeholder deadline.</p> <p>When we referred to this observer data in our submission for the Report Two, the CAB claimed not to know what we referred to and didn't adequately respond to our points on this.</p>
Affect on the determination	<p>SHARKPROJECT had very little time to analyse the observer data in order to answer some key questions we had about the CAB's statements and apparent discrepancies between bycatch figures shown in Second Draft Report compared to the previous reports.</p> <p>The CAB did not respond to our point in our submission on Report Two regarding an observer reporting from Alakrana that two <i>Carcharhinus longimanus</i> (oceanic white tip sharks) were taken to the kitchen (see line 262 of the original data sheet in the excel file), which is in breach of IOTC regulations.</p> <p>References: Email trail between CAB and SHARKPROJECT and the Excel spreadsheet of 2016 observer data for Echebatar from AZTI (Attached)</p>

5. Conditions

5.1. Objection in line with [PD2.7.2.2](#)

Please ensure you have filled in your [contact details \(Section 2\)](#) and [objections category \(Section 3\)](#) before filling in this section.

Listing the conditions placed on the relevant Performance Indicator(s) and, using the template below, please clearly identify –

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

Conditions	
Performance Indicator	2.3.3 Information Strategy
Condition 1	By the fourth annual surveillance audit, the client must demonstrate that information is adequate to measure trends and support a strategy to manage impacts on ETP species
Reason	<p>1. The requirements of the condition focus only on improving data for the UoA. This can only show trends of bycatch numbers for the UoA but will give no indication of the population trends of ETP species in the Indian Ocean to assess impacts. Without population trends being known, or an assessment of fisheries impacts for the region, how will the UoA determine necessary catch limits to ensure minimal impacts on the populations of ETP species?</p> <p>There is nothing in the condition about working to improve data collection for ETP species in the broader purse seine fleet or the broader Indian Ocean fisheries - currently there are IOTC regulations for bycatch data collection but poor implementation and little in the way of sanctions for those who do not comply. What will the UoA do to address this?</p> <p>2. The requirement to increase the analysis of observer data to 50% of total sets is simply not good enough given the currently small data set and short time period. The data has been collected so we see no good reason why the full data set for just 5 vessels cannot be fully analysed and updated annually, especially considering the serious level of shark bycatch by this fleet and the overall poor bycatch data collection in the IOTC.</p>

Supporting Rationale	<p>Please refer to the Supporting Rationale and Evidence provided in Section 6 below in support of our objection to the scoring of 2.3.3a.</p> <p>The condition milestones and deliverables as described is simply not enough to address all the current issues with available information we have highlighted.</p>
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Conditions

Performance Indicator	2.4.1 Habitats Outcome
Condition 2	By the fourth annual surveillance audit, the client must demonstrate that FADs are highly unlikely to reduce structure and function of coral reefs to a point where there would be serious or irreversible harm.
Reason	This condition lacks some clarity on the milestones and deliverables which will make it hard to assess when they have truly been met.
Supporting Rationale	<p>We <u>assume</u>, given the range of action partners involved that the FADs referred to are ALL and ANY FADs used in the Indian Ocean and it is the cumulative impacts that are being assessed, not just impacts from the UoA FAD. The condition needs to clarify the following:</p> <ul style="list-style-type: none"> • Is this for all FADs used in the Indian Ocean, or is it only for FAD of the type and design currently used by Echebatar? • If it is only for Echebatar, does it include any other FADs released by other vessels that Echebatar sets on? • Does this refer to all coral reefs in the Indian Ocean or just the ones in the area where Echebatar operates and where Echebatar FADs are shown to, or are likely to, be entangled on? • Does this require consideration of impacts reef by reef or over a larger area, for both UoA impacts and other vessel impacts, and their cumulative impacts?

Conditions	
Performance Indicator	2.4.2 Habitats Management
Condition 3	By the third annual surveillance audit, the client must provide evidence that a partial strategy in place that is expected to result that it will be highly unlikely that derelict FADs could reduce structure and function of the coral reefs to a point where there would be serious or irreversible harm.
Reason	As for condition 2, which this is linked to, this condition lacks some clarity on the milestones and deliverables which will make it hard to assess when they have truly been met.
Supporting Rationale	<p>We <u>assume</u>, given the range of action partners involved, that the strategy for FADs referred to here considers impacts of ALL and ANY FADs used in the Indian Ocean and it is the cumulative impacts that are being assessed, not just impacts from the UoA FAD. The condition needs to clarify the following:</p> <ul style="list-style-type: none"> • Is this a strategy that will work for all FADs used in the Indian Ocean, or is it only for FAD of the type and design currently used by Echebatar? • If it is a strategy only for Echebatar, does it include any other FADs released by other vessels that Echebatar sets on? • Does this refer to all coral reefs in the Indian Ocean or just the ones in the area where Echebatar operates and where Echebatar FADs are shown to, or are likely to, be entangled on? • Does this strategy require consideration of impacts reef by reef or over a larger area, for both UoA impacts and other vessel impacts, and their cumulative impacts?

Performance Indicator	2.4.3 Habitats Information
Condition 4	By the fourth annual surveillance audit, the client must provide evidence that information is adequate to allow for identification of the main impacts of derelict FADs on coral reefs, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear.
Reason	As for condition 2 and 3, which this is linked to, this condition lacks some clarity on the milestones and deliverables which will make it hard to assess when they have truly been met.
Supporting Rationale	<p>We <u>assume</u>, given the range of action partners involved, that the information requirements for FADs referred to are ALL and ANY FADs used in the Indian Ocean so that it is an IOTC-wide strategy being developed and cumulative impacts that are being assessed, not just impacts from the UoA FADs. The condition needs to clarify the following:</p> <ul style="list-style-type: none"> • Does the information collection refer to all FADs used in the Indian Ocean, or is it only for FAD of the type and design currently used by Echebatar? • If it is only for Echebatar, does it include any other FADs released by other vessels that Echebatar sets on? • Does this refer to all coral reefs in the Indian Ocean or just the ones in the area where Echebatar operates and where Echebatar FADs are shown to, or are likely to, be entangled on? • Will the information collected allow consideration of impacts reef by reef and over a larger area, for both UoA impacts and other vessel impacts, and their cumulative impacts?

Please repeat table as needed for each Performance Indicator and condition to be included in the Objection.

6. Scoring

6.1. Objection in line with [PD2.7.2.3](#)

Please ensure you have filled in your [contact details \(Section 2\)](#) and [objections category \(Section 3\)](#) before filling in this section.

Listing the conditions placed on the relevant Performance Indicator(s) and, using the template below, please clearly identify –

- a. The reason(s) you or your organisation believes that the score(s) presented within the Final Report cannot be justified; and,
- b. Your rationale and/or evidence in support of a different conclusion, making reference to the particular Performance Indicator in question.

Please repeat table as needed for each Performance Indicator and score to be included in the Objection.

Scoring	
Performance Indicator	2.1.2a Primary species management strategy - management strategy in place
Reason	<p>The CAB awarded a score of 80 for “There is a partial strategy in place for the UoA, if necessary, that is expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are highly likely to be above the point where recruitment would be impaired.”</p> <p>SG 60 is: There are measures in place for the UoA, if necessary, that are expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are likely to above the point where recruitment would be impaired.</p> <p>The UoA does not meet either SG80 or 60 as in neither case are the agreed IOTC management measures “expected to maintain or to not hinder rebuilding” of yellowfin, so it is irrelevant that UoA “operates within the defined limits.”</p>

<p>Supporting rationale and or evidence</p> <p>2.1.2a</p>	<p>The CAB incorrectly states throughout scoring sections 2.1.2a-d that the measures contained in the interim plan for rebuilding yellowfin tuna stock, or IOTC Resolution 2016/01, will successfully meet the goals of the IOTC.</p> <p>The CAB states that the (sadly unambitious) goal of IOTC Resolution 2016/01 was to rebuild the stock to B>Bmsy with 50% probability by 2024, but makes no mention of the cuts to catches required to achieve this.</p> <p>As stated clearly in the preamble to the Resolution 2016/01, the Science Committee recommended in November 2015 (see also: SC 2015) that this goal would require a 20% catch reduction from 2014 catch levels. The negotiations at IOTC on this matter were incredibly difficult and the actual agreed levels of catch reduction for each gear type contained in this Resolution were all well below the 20% cut required: 15% for purse seiners with catches >5000t, 10% for longliners with catches >5000t, 10% for gillnets with catches >2000t, and 5% for any other gear types with catches >5000t. Given the proportion of catches taken by each of these gear groups, if these cuts were implemented the IOTC would be lucky to achieve a 10% overall cut. The Resolution came into force on 1st January 2017.</p> <p>In late March/early April, the CAB was warned by a number of stakeholders during onsite meetings (including representatives from Seychelles Gov, point 8, p375 of Final report V2) that the Seychelles had not yet implemented the measure, and wanted Resolution 2016/01 changed to allow their fleet to base their catch reductions on their higher 2015 catches as their 2014 catches were low due to vessels being in the process of returning to the fishery after piracy issues. In May 2017 a revision was made to the recovery plan (Resolution 2017-01), and Seychelles were granted an addition that allowed them, and any other Small Island Developing States, Least Developed Countries, and Small Vulnerable Economies, to use catch levels of either 2014 or 2015 for their base year for catch reductions. This will further limit the actual catch reductions to well below what is required by the goal.</p> <p>What level of cuts will Echebatar's Seychelles fleet take?</p>
<p>References</p> <p>2.1.2a</p>	<p>IOTC resolution 2016/01. http://www.iotc.org/cmm/resolution-1601-interim-plan-rebuilding-indian-ocean-yellowfin-tuna-stock</p> <p>IOTC resolution 2017/01 http://www.iotc.org/sites/default/files/documents/compliance/cmm/iotc_cmm_1701.pdf</p> <p>SC (2015). Report of the 18th Session of the IOTC Scientific Committee. http://www.iotc.org/documents/report-18th-session-iotc-scientific-committee</p>

Scoring	
Performance Indicator	2.1.2 b Primary species management strategy - Management strategy evaluation
Reason 2.1.2b	<p>The CAB scored this at 80: There is some objective basis for confidence that the measures/partial strategy will work, based on some information directly about the fishery and/or species involved.</p> <p>SG60 is: The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).</p> <p>The UOA does not meet either SG80 or SG60. There is no objective basis to conclude with any confidence that the measures will work, as the measures cannot even meet the agreed management goal. There is no “plausible argument” that can conclude otherwise.</p>

Supporting rationale and or evidence

2.1.2b

The CAB states that there are measures and a partial strategy in place for yellowfin, but **does not mention that these measures fail to meet the IOTC's stated goals for the recovery of yellowfin**. They also state: *"There is some concern that the implementation of Res 16/01 has yet to unfold and, in particular, that **measures for Seychelles fisheries have not yet been implemented**. Nevertheless, given the UoA already meets Res 16-01 limits, it is reasonable to expect the UoA **"measures/partial strategy"** to continue to work."*

As stated clearly in the preamble to the Resolution 2016/01, the **goal of the IOTC was to rebuild the stock to B>Bmsy with 50% probability by 2024**, and that the Science Committee (SC) recommended in November 2015 that **this goal would require a 20% catch reduction from 2014 catch levels**. The **actual agreed levels of catch reduction for each gear type contained in Res 2016/01 were all well below the 20% cut required**. In addition, changes to the Resolution in May 2017 (Res 2017/01) mean this is further weakened (see 2.1.2a above for details).

The SC has not specifically evaluated the impact of Res 2016/01 (or 2017/01), however, it is clear from both the 2015 and 2016 yellowfin stock assessment projections in the respective SC reports that the agreed cuts will not be enough.

The SC projections based in the 2015 yellowfin stock assessment showed that catches maintained at 80% (i.e. a 20% cut) of the 2014 level (427,440 t) had a 91% likelihood that, by 2017, the stock would still be below Bmsy, and a 50% likelihood that it will be below Bmsy in 2025 - this is the basis of the SC advice for Res 2016/01. At 90% of the 2014 level (i.e. 10% cut) there was a 90% likelihood that, by 2017, the stock would still be below Bmsy, and a 100% likelihood that it will be below Bmsy in 2025 (see Appendix XI, table 2 in SC 2015). **That is, the 10% cuts likely to result from Res 2016/01 had a 100% likelihood of failing to rebuild the stock to Bmsy by 2025.**

The SC projections in the slightly more optimistic 2016 yellowfin stock assessment, show that catches maintained at 90% (i.e. 10% cut) of the 2015 level (slightly lower than 2014 catch at 407,5704 t) had a 80% likelihood that, by 2018, the stock would still be below Bmsy, and a 60% likelihood that it will be below Bmsy in 2025 (see Appendix XI, table 2 in SC 2016). That is, neither the 2016/01 or 2017/01 measures can meet the stated rebuilding goals.

The CAB does not mention that the catch cuts required to meet the IOTC's goals were not agreed, which means it is irrelevant that the UoA meets the Res 2016/01 measures as they CANNOT work. It is NOT reasonable to expect them to 'continue to work.' The CAB also does not mention the changes in Res 2017/01 that will change the cut in catches required by Echebatar's Seychelles vessels.

<p>References</p> <p>2.1.2b</p>	<p>IOTC resolution 2016/01. http://www.iotc.org/cmm/resolution-1601-interim-plan-rebuilding-indian-ocean-yellowfin-tuna-stock</p> <p>IOTC resolution 2017/01 http://www.iotc.org/sites/default/files/documents/compliance/cmm/iotc_cmm_1701.pdf</p> <p>SC (2015). Report of the 18th Session of the IOTC Scientific Committee. http://www.iotc.org/documents/report-18th-session-iotc-scientific-committee</p> <p>SC (2016). Report of the 19th Session of the IOTC Scientific Committee. http://www.iotc.org/sites/default/files/documents/2017/01/IOTC-2016-SC19-RE_-_FINAL_DO_NOT_MODIFY_0.pdf</p>
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Scoring

<p>Performance Indicator</p>	<p>2.1.2 c Primary species management strategy - Management strategy implementation</p>
<p>Reason</p> <p>2.1.2 c</p>	<p>The CAB scored this at 80: There is some evidence that the measures/partial strategy is being implemented successfully.</p> <p>There is no option for SG60</p> <p>The UOA does not meet SG80 as the evidence clearly shows the opposite - firstly that even if the measure, IOTC resolution 2016/01, was implemented it would not be effective, and secondly there was evidence at the time of the CABs assessment, as the CAB states in every section of 2.1.2a-c, that it was NOT being fully implemented.</p>

Supporting rationale and or evidence

2.1.2c

Resolution 2016/01 came into force on 1st January 2017, and yet the CAB was made aware at the time of the site visits three months later, in late March/early April, that implementation by some IOTC parties was an issue.

In 2.1.2a the CAB states: *“However, there is concern about the fleet wide implementation of Res 16/01.”*

In 2.1.2b the CAB states: *“There is some concern that the implementation of Res 16/01 has yet to unfold and, in particular, that measures for Seychelles fisheries have not yet been implemented.”*

However in this PI 2.1.2c, the CAB now says: *“Therefore, there is some evidence that the measures and partial strategy are being implemented successfully.”* It provides no evidence to counter its previous statements other than there is a partial strategy to maintain yellowfin stock (which clearly does not and cannot work) and to point out what proportion of yellowfin catch the UoA takes, neither of which have anything to do with implementation. It then claims this ‘evidence’ is supported by a decline in the UoA catch but then says actually, the catch data series, is too short and the evidence is not clear!

In fact the catch series is for 2012-2015 and Res 2016/01 didn’t come into force until 2017, so the only relevance this catch data has is for any other relevant IOTC measures prior to Res 2016/01 - these have not been mentioned by the CAB, and together had allowed the stock to decline and require a rebuilding plan.

The CAB was warned by a number of stakeholders during site visit meetings (including representatives from Seychelles Government, see point 8, p375 of Final Report V2) that **the Seychelles in particular had not yet implemented the measure, and wanted Resolution 2016/01 changed** to allow their fleet to base their catch reductions on 2015 catches as their 2014 catches were low due to vessels being in the process of returning to the fishery after piracy issues.

At the IOTC Commission meeting in May 2017, a revision was made to the recovery plan (Resolution 2017-01), and Seychelles were granted an addition that allowed them, and any other Small Island Developing States, Least Developed Countries, and Small Vulnerable Economies, to use catch levels of either 2014 or 2015 for their base year for catch reductions. **This will further limit the actual catch reductions to well below what is required by the goal.**

Given the seriousness of concerns regarding implementation raised in stakeholder meetings, and the statements made by Seychelles representatives, did the CAB not attend this IOTC meeting in May 2017 or at least follow-up on the outcomes?

<p>References</p> <p>2.1.2c</p>	<p>IOTC resolution 2016/01. http://www.iotc.org/cmm/resolution-1601-interim-plan-rebuilding-indian-ocean-yellowfin-tuna-stock</p> <p>IOTC resolution 2017/01 http://www.iotc.org/sites/default/files/documents/compliance/cmm/iotc_cmm_1701.pdf</p> <p>SC (2015). Report of the 18th Session of the IOTC Scientific Committee. http://www.iotc.org/documents/report-18th-session-iotc-scientific-committee</p> <p>SC (2016). Report of the 19th Session of the IOTC Scientific Committee. http://www.iotc.org/sites/default/files/documents/2017/01/IOTC-2016-SC19-RE_-_FINAL_DO_NOT_MODIFY_0.pdf</p>
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Scoring

Performance Indicator	2.2.2d - Secondary species management strategy - shark finning
Reason	<p>The CAB scored this at 80: It is highly likely that shark finning is not taking place.</p> <p>SG60 is: It is likely the shark finning is not taking place.</p> <p>The UOA does NOT meet SG80 as the existence of regulations and presence of observers, as described by the CAB, have not proven effective in preventing finning in other tuna fisheries, including purse seiners. It is possible to argue the UOA meets 60 but there should certainly be a Condition attached to ensure this is addressed.</p>

Supporting rationale and or evidence

2.2.2d

1. Silky sharks, the main species caught by the UOA represent at least 3-4% of fins auctioned in Hong Kong, the third highest after blue and hammerhead sharks. (Clarke S et al., 2006).

2. Regulations alone are not strong enough to prevent finning. The EU, IOTC, and Seychelles have finning bans, however, the later two allow fins to be landed separately, as long as they make up no more than 5% of the dressed shark carcasses. This fin-to-carcass ratio has been criticised by scientists globally, including by both IOTC and WCPFC Scientific Committees (e.g. SC 2015), and in the EU's own Regulation 605/213, as it is not a verifiable means of ensuring the eradication of finning. At the time of this UOA assessment, the 5%ratio requirement was in use in both IOTC Resolution 05/05 (superseded by 17/05) and Seychelles. The EU requires sharks landed with fins attached.

(Note: The preamble in the new IOTC shark measure highlights the 5% ratio issue and now requires sharks landed fresh to be landed fins attached, but still allows frozen sharks to be landed separately.)

3. The CAB has provided insufficient evidence that regulations are followed. Observer coverage alone is not a sufficient deterrent. The CAB states that having 100% observer coverage would detect whether shark finning is occurring, despite the fact much of the UOA observer data still has to be analysed (so far only 29%, 53% and 34% of observed sets for each of 2014, 2015 and 2016, respectively). Why is the CAB so sure that it won't reveal finning?

In the Western & Central Pacific Fisheries Commission, which has a similar shark finning regulation (fin-to-carcass ratio), the independent Regional Observer Program with 100% coverage has been reporting (e.g. see ROP 2015) finning of both silky sharks and oceanic whitecap sharks on purse seiner vessels.

The CAB states that there is little opportunity to fin sharks and yet according to the data sheets provided to SHARKPROJECT by the CAB, an observer reported from Alakrana that two *Carcharhinus longimanus* (oceanic white tip sharks) were "taken to the kitchen" (see line 262 of the original data sheet in the excel file).

4. Bribery, violence and abuse are well-documented issues for observers (e.g. <http://www.apo-observers.org/>) who may not feel safe to reporting finning. The program in IOTC is not independent, so has a greater risk of observers turning a blind eye. Finally, observers cannot be everywhere at once - if they are sampling on deck, who is watching down below?

References	AZTI's 2016 observer data sheets for Echebatar (attached)
2.2.2d	<p>Association of Professional Observers (APO) website: http://www.apo-observers.org/</p> <p>Clarke S, Magnusson JE, Abercrombie DL, et al (2006). Identification of shark species composition and proportion in the Hong Kong shark fin market using molecular genetics and trade records. <i>Conserv Biol</i> 20: 201-11.</p> <p>IOTC resolution 05/05 and 17/05. http://www.iotc.org/cmm/resolution-1705-%E2%80%A8on-conservation-sharks-caught-association-fisheries-managed-iotc</p> <p>ROP (2015). Annual Report of the Regional Observer Programme. WCPFC-TCC11-2015-RP02 https://www.wcpfc.int/node/26762</p> <p>See page 26, section 6.2.2a of: SC (2015). Summary report 11th Regular Session of the Scientific Committee. WCPFC. https://www.wcpfc.int/meetings/11th-regular-session-scientific-committee</p>

Scoring

Performance Indicator	2.2.2e - Secondary species management strategy - Alternative measures
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Reason

2.2.2e

The CAB scores this at 100: There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of all secondary species, and they are implemented, as appropriate.

SG 80 is: There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA related mortality of unwanted catch of all secondary species and they are implemented as appropriate.

SG60 is: There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main secondary species.

SA 3.5.3.1 (FCR, p.140) defines states that the term alternative measures as: *“shall be interpreted by the team as alternative fishing gear and/or practices that have been shown to minimise the rate of incidental mortality of the species or species type to the lowest achievable levels”*.

Neither SG100 nor SG80 are met as alternative measures are NOT implemented as appropriate. There is no evidence that the CAB has considered “alternatives” or considered if they are “appropriate”.

SG60 could be met as there have been reviews on the cause of increased bycatch by purse seiners, i.e. setting on FADs instead of free schools, and there are reviews of the potential effectiveness and practicality of alternative measures to minimise FAD-related mortality of unwanted catch. However, there is no evidence that the CAB has considered these or other “alternatives” or considered if they are “appropriate”.

Supporting rationale and or evidence

2.2.2e

1. The most effective measures for reducing mortality of non-target species are those that prevent the interactions with fishing gear in the first place. This could include temporal and spacial closures of areas with higher bycatch (see e.g. Tolotti et al., 2015) such as for juvenile silky sharks, as well as gear modifications and limitations on using problematic gear types, such as the seasonal FAD bans and FAD set limits used in the Western and Central Pacific.

2. Setting on free schools has significantly lower bycatch than FAD sets. As the CAB shows throughout the report in its comparison of bycatch in both set types, the most effective way to reduce bycatch in the purse seine nets is to set on free schools, not on FADs.

We do not currently have data that would allow temporal or area closures to avoid ETP species or ways to prevent threatened species like silky sharks from being attracted to FADs, or success in releasing the majority of them safely from the purse seine nets before brailing, or for releasing them alive from deck with a high rate of survival. Therefore, reducing the number of FAD sets is currently the only available practical and simple option to reduce bycatch mortality.

3. The few positive changes made by the UoA with regard to FAD design and bycatch release are undermined by the dramatic increase in the number and proportion of sets on FADs. The introduction of non-entangling FADs that have no netting attach beneath the FAD will certainly reduce the number of deaths of silky sharks and turtles entangled under FADs. In addition the changes made by the UoA to encourage safe release of bycatch is a useful step. However, being caught in purse seine nets when they set on FADs remains a significant cause of mortality for non-target species, especially for more sensitive and threatened species like silky sharks.

While improvements to the release of bycatch is certainly a valuable part of the process, for sensitive species like silky sharks, it is far too late to release them after capture due to their very high post-release mortality rate. Throughout the scientific literature the mantra has been the same - the best way to protect sharks is not to catch them in the first place. Measures must focus first on reducing interactions with fishing gear, and then on safe release as early as possible in the process for those that do get caught.

Observer data clearly shows that between 2014 and 2016 the UoA more than doubled its total number of sets, from 804 to 1700. Free school sets declined from 237 to 190, while FAD sets increased from 567 to 1510 sets. FADs sets went from 71% to 89% of total sets in 3 years (Table 21, p40 Final report v2). So not only is the UoA not applying the most effective reduction measures, they are knowingly increasing use of the set type that takes more bycatch.

<p>Supporting rationale and or evidence (continued)</p> <p>2.2.2e</p>	<p><u>4. The UoA uses more FADs than many other fleets.</u> The CAB likes to highlight the fact that Echebatar set their own limit to 375 active FADs at anyone time, but provides no information on how this compares to the rest of the fleets. Like the rest of the Spanish-owned vessels, Echebatar uses a large number of FADs, which is why the UoA needs a special supply vessel to carry them. It is easy to see who are the big FAD users - of 23 supply vessels registered in IOTC in 2017 13 were flagged to Spain, 7 to Seychelles and just one each to France, Mauritius and Korea (data available by year on IOTC website, or see Greenpeace 2017). IOTC measures that limit the numbers of FADs and supply vessels only really impacted these fleets - others can still increase the number of FADs they use, and there are NO limits to the number of FAD sets made.</p> <p><u>5. The CAB provides no analysis of how often the UoA sets on FADs from other vessels,</u> what kind of FADs these are or their impacts, and gives no evidence for how this can or will be monitored with regard to the UoA.</p>
<p>References</p> <p>2.2.2e</p>	<p>Greenpeace (2017). Supply vessels in the Indian Ocean. IOTC-2017-S21-Inf03 http://www.iotc.org/documents/supply-vessels-operating-indian-ocean</p> <p>IOTC vessel registry: http://www.iotc.org/vessels</p> <p>Tolotti MT, Filmalter JD, Bach P, Travassos P, Seret B, Dagorn L (2015). Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. Global Ecology and Conservation 4: 1-7. doi:10.1016/j.gecco.2015.05.003.</p>

<h2 style="background-color: #0056b3; color: white; padding: 5px;">Scoring</h2>	
<p>Performance Indicator</p>	<p>2.2.3a-c - Secondary species information - minor secondary</p>
<p>Reason</p> <p>2.2.3a-c</p>	<p>The scoring for this whole section is unclear so it is not possible to determine if it has been correctly scored.</p> <p>2.2.3 a is scored as 100</p> <p>2.2.3 b has no score. The scoring for this section is not given. The CAB simply states it does not meet SG100 and there is no other score option presented or discussed.</p> <p>2.2.4 c is scored as 80 we assume, as there is no discussion of it meeting parts of 100 to gain a higher score.</p> <p>The total score for 2.2.3 is given as 85. As this is not an average of 100 + 80, it suggests either that that 2.2.3 b or 2.2.4 c were scored differently in some way that is not made clear.</p>

Supporting rationale and or evidence	See Table 30 on page 81 for PI 2.2.3 , and the PI summary scores in Table 5a on page 6.
2.2.3a-c	

Scoring	
Performance Indicator	2.3.1b - ETP species outcomes - Direct effects
Reason	The CAB scores this at 80: Direct effects of the UoA are highly likely to not hinder recovery of ETP species
2.3.1b	<p>SG 60 is: Known direct effects of the UoA are likely to not hinder recovery of ETP species.</p> <p>It is not reasonable to conclude from the evidence available that the direct effects of the UoA are highly likely to not hinder recovery of ETP species as data from the UoA is limited and problematic. In addition the CAB underestimates the potential impact of silky shark catches by the UoA.</p>

Supporting rationale and or evidence

2.3.1b

Observer data

1. While the UoA has 100% observer coverage since 2014, not all of the data from these observers has been processed, so it is not available. The CAB claims that even so, with the available observer data the UoA still exceeds recommended minimum observer coverage levels, such as the IOTC's recommendation for 25% coverage.

However, recommendations by various science bodies and studies (e.g. Lawson 2006, Debski et al 2016) are for *representational* (by season, area, gear type, etc.) coverage of the entire fishery, and *over a reasonable timescale*. The bycatch data currently available for the UoA is clearly not representational, nor does it cover a reasonable timescale.

The primary data on which the CAB makes its assessment is for a small subset of purse seine vessels. Of the five vessels currently in the fleet, just two years of observer data has been processed for two vessels, and three years of data for the other three vessels (see Table 19, p39, Final report v2). There is an additional two years of data (2014-2015) for a sixth vessel *Campolibre Alai* which was withdrawn from the fleet. The level of data processed for each vessel for 2016 ranged from just 21% to 52%.

There are significant variations in the numbers and proportions of different species caught - between sets on individual vessels, between the vessels, and between years. For example, based on the observer data from AZTI, which the CAB sent to SHARKPROJECT, in 2016 the *Alakrana* reportedly released only 30% of silky sharks alive while the *Elai Alai* released 95% of silky sharks alive. As juvenile silky sharks swim in groups, 5-10 silky sharks are often caught in a single set, but this can be much higher: 75 silky sharks in one set on *Izaro* "thrown dead into the sea" (see Excel file, original data sheet, line 2845, set 5103) and 40 dead in one set on *Euskadi Alai* (line 1757, set 4889). Weights were not recorded for these sharks on *Izaro*, but for *Euskadi Alai* they were small juveniles with an average weight of just 8 kg. If you are missing 79% of your data, as for *Euskadi Alai* in 2016, you could be missing a significant number of these high bycatch sets, and significantly underestimating bycatch mortality.

With such large variations evidence in the data, a full analysis of all available observer data is needed to draw reasonable conclusions, with vessel-by-vessel analysis, as well as a longer time series.

2. Bycatch rates and the proportions of FAD sets to free sets INCREASED between the time of the Certifiers Desk Review and the Second Report as more data was analysed.

How can the CAB be sure that when the remaining data is analysed there will not be further significant changes?

Supporting rationale
and or evidence
(continued)

2.3.1b

3. Bycatch rates are underestimated by both observers and logbooks. Hutchinson et al (2015) stated: "*Comparison of the number of captured sharks observed by the scientific party and those reported by the vessel and fishery observer revealed that there are significant recording discrepancies regarding the number of sharks impacted by this fishery. We found catch rates were significantly underestimated by both the observer and the vessel logbook.*"

They noted this was not necessarily misreporting, but due to the particulars of catch-unloading and that fact that observers are occupied conducting the various catch sampling and estimation duties in addition to documenting all bycatch. They also noted significant differences between vessels: "*It is also worth noting that due to the variety of vessels in the tropical tuna purse seine fishery, loading and hold styles vary dramatically, and this should be taken into account when considering these estimates.*"

Silky sharks

Given that the current estimate of silky shark catches by the UoA can only be a minimum estimate, and that we don't know the total catches in the region, or current population size, how can the CAB claim the UoA won't impact recovery, especially when there is no recovery plan agreed? In the Western and Central Pacific, the fishing mortality on silky sharks for the purse seine FAD fleet ALONE is above sustainable levels ($F > F_{msy}$) due to the high catch of predominantly juveniles, and while this is a larger fleet than the IOTC area, FAD use is lower - 50:50 free school to associated sets increasing to 70:30 since the 3 month FAD ban was introduced in 2010 (e.g. see Williams et al 2017).

We note that while MSC CR v.2 GSA 3.1.5.2 only requires that species listed in the CMS are considered ETP, in Sept 2017 silky sharks were upgraded from Near Threatened to Vulnerable on the IUCN Redlist of Threatened Species (Rigby et al 2017). They note that "*In the Indian Ocean, there is no stock assessment or any reliable fishery indicators of status, therefore the stock status is highly uncertain*" but also note anecdotal information from Maldivian shark fishermen that abundance and size of silky sharks have declined, and that Sri Lankan silky shark fishery catches have declined.

References	<p>Debski I, Pierre J, Knowles K (2016). Observer coverage to monitor seabird captures in pelagic longline fisheries. WCPFC-SC12-2016/EB-I-07. https://www.wcpfc.int/node/27463</p> <p>Hutchinson MR, Itano DG, Muir JA, Holland KN (2015). Post-release survival of juvenile silky sharks captured in a tropical tuna purse seine fishery. <i>Mar Ecol Prog Ser</i>; 521: 143-54. http://www.int-res.com/articles/meps_oa/m521p143.pdf</p> <p>Lawson T (2006). Scientific aspects of observer programmes for tuna fisheries in the western and central Pacific Ocean. WCPFC-SC2-2006/ST WP-1. https://www.wcpfc.int/node/1716</p> <p>See page 13, section 4.1.4 of: Rice J, Shelton H (2013). Updated stock assessment of silky sharks in the western and central Pacific ocean. WCPFC-SC-2013/SA-WP-03. https://www.wcpfc.int/node/3685</p> <p>Rigby, C.L., Sherman, C.S., Chin, A. & Simpfendorfer, C. 2017. <i>Carcharhinus falciformis</i>. The IUCN Red List of Threatened Species 2017: e.T39370A117721799. http://www.iucnredlist.org/details/39370/0</p> <p>See page 7 Fig 9, and Appendix Fig A4 of: Williams P, Terawasi P, Reid C (2017). Overview of tuna fisheries in the western and Central Pacific Ocean, including Economic Conditions. WCPFC-SC13-2017/GN-WP-01. https://www.wcpfc.int/node/29628</p>
2.3.1b	

Scoring	
Performance Indicator	2.3.2a ETP species management strategy - Management Strategy in place (National and International requirements)
Reason 2.3.2a	<p>The CAB scores this as 80: There is a strategy in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>SG60 is: There are measures in place that minimise the UoA related mortality of ETP species, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.</p> <p>The UoA does not meet either 60 or 80. There is little evidence for any coherent timebound strategy, there are very few national or international requirements for the key ETP species caught in the Indian Ocean, and plenty of evidence that any measures in place do NOT minimise mortality, they merely reduce it a little.</p>

Supporting rationale and or evidence

2.3.2a

1. As described in 2.2.2e above, the UoA has minimal measures in place to reduce the catch of ETP species. Other than the use of non-entangling FADs, the measures are focused on improving the post-capture release, which may help a little, but does little for silky sharks with a >85% post-release mortality rate! Meanwhile the UoA increased the proportion of FAD sets, there are no FAD set limits, and there are no measures described for reducing or avoiding sets on entangling FADs from other vessels and no evidence of a monitoring program to ensure this.

2. CAB makes a big deal of all the IOTC resolutions available but few do anything to reduce bycatch or protect ETP species. The CAB does no analysis of their effectiveness, implementation, or monitoring, control and surveillance. For example, CITES, when properly implemented, can only ensure that traded shark products are caught according to legal regulations, so it is somewhat irrelevant when there are so few regulations that can reduce mortality of sharks in the Indian Ocean. Resolution 13/06 does reduce targeting of oceanic white tip (OWT) sharks (IUCN Vulnerable) by longline vessels, and could reduce finning, but does not prevent unintentional bycatch. There is no analysis of the effectiveness of Res 13/06 in reducing OWT shark mortality, but it is a common finding that only measures that prevent the interactions of sharks with fishing gear in the first place are effective (e.g. Tolotti et al., 2015). There are no specific IOTC measures to protect silky sharks or sea turtles.

3. There is evidence that Echebatar does not follow the few rules that are in place. An observer on board Alakrana in 2016 reported that two *Carcharhinus longimanus* (OWT sharks) were “taken to the kitchen” (see line 262 of the original data sheet in the Excel file). This is in breach of IOTC Resolution 13/06 that, as the CAB notes, “requires IOTC members to **prohibit**, as an interim pilot measure, all fishing vessels flying their flag and on the IOTC Record of Authorised Vessels, or authorised to fish for tuna or tuna-like species managed by the IOTC on the high seas **to retain onboard, tranship, land or store any part or whole carcass of oceanic whitetip sharks. Furthermore, IOTC member vessels fishing on the high seas are required to promptly release unharmed, to the extent practicable, oceanic white tip sharks.** Contracting party vessels are also required to encourage their fishers to record incidental catches as well as live releases of oceanic white tip shark.”

Other species often reported as “taken to the kitchen” were distinctive fish species like dolphin fish, likely for crew meals. None of these can be mistaken for the distinctive *C. longimanus*. Was this incident investigated? What was the outcome? This incidence was noted in our comments to the CAB (p290 of Final report v2) but oddly dismissed as ‘anecdotal’. It was the CAB itself that provided SHARKPROJECT this data, emailed to us on 11th Sept 2017 - 2016 observer data available from AZTI in an Excel sheet.

References	AZTI's 2016 observer data sheets for Echebatar (attached)
2.3.2a	<p>IOTC Resolution 13/06 http://www.iotc.org/cmm/resolution-1306-scientific-and-management-framework-conservation-sharks-species-caught</p> <p>Tolotti MT, Filmalter JD, Bach P, Travassos P, Seret B, Dagorn L (2015). Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. <i>Global Ecology and Conservation</i> 4: 1-7. doi:10.1016/j.gecco.2015.05.003.</p>

Scoring

Performance Indicator	2.3.2c ETP species management strategy - Management strategy evaluation
Reason	<p>The CAB scores this as 80: There is an objective basis for confidence that the measures/strategy will work, based on information directly about the fishery and/or the species involved.</p> <p>SG 60 is: The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar /species).</p> <p>The UoA does not meet either 60 or 80. There is little evidence for cohesive, time bound strategy; there are very few national or international requirements to protect the key ETP species caught in the Indian Ocean, a significant lack of data to assess any measures that are in place, and plenty of evidence that what few measures are in place for both UoA and broader IOTC, do NOT "minimise" mortality, they merely reduce it a little, especially with regard to sharks.</p>
2.3.2c	

**Supporting rationale
and or evidence**

2.3.2c

Sea turtles

There is some evidence that the use of non-entangling FADs has reduced the primary cause of sea-turtles deaths from purse seiners, i.e. entanglement and drowning in netting hanging beneath FADs. Sea turtles are certainly much harder than sharks, and easier to handle and release alive. However, Echebatar sets on FADs from other vessels and this impact is not quantified by the CAB; there are no measures described for reducing or avoiding sets on entangling FADs from these vessels and no evidence of a monitoring program to ensure this.

The CAB also claims that the decline in sea turtle catch is most likely due to the use of non-entangling FADs rather than a decline in abundance and cites as evidence an increase in loggerhead (IUCN Endangered) nesting sites in the region. However, there is no evidence provided for the other species caught by the UoA - green turtle (Endangered), olive ridley (Vulnerable) and hawksbill (Critically Endangered). Indeed, the recent 2013 update of the IUCN listing for Leatherback lists the NE Indian Ocean sub-population as Data Deficient and the SW population as Critically Endangered, declining, and with an estimated 148 breeding adults for which a relatively small annual catch by purse seiners could certainly be significant mortality rate (Wallace et al 2013).

In addition, an assessment of the conservation status of spatially and biologically distinct marine turtle Regional Management Units (RMUs), showed that of the world's 11 most endangered RMUs, five are in the Indian Ocean and included populations of loggerhead, olive ridley, and hawksbill turtles (Wallace et al (2011). Given this evidence, how can the CAB claim it is likely that a decline in turtles catch is not, at least in part, due to a decline in sea turtles?

Finally, as we noted in 2.3.1b above, there are considerable issues with the small amount of observer data available for bycatch.

Therefore, there can be little "objective basis for confidence" that any of the UoA measures will work.

<p>Supporting rationale and or evidence (continued)</p> <p>2.3.2c</p>	<p>Sharks</p> <p>As described in detail in 2.2.2e above, the UoA has minimal measures in place to reduce the catch of ETP shark species. Other than the use of non-entangling FADs, the measures are focused on improving the post-capture release, which may help some shark species, but does little for silky sharks with a >85% post-release mortality rate. Meanwhile the UoA has increased the proportion of FAD sets, and there are no FAD set limits agreed by IOTC nor does the UoA give any indication they will limit sets themselves. In addition, there are no measures described for the UoA to reduce or avoid sets on entangling FADs from other vessels, and no evidence of a monitoring program if such a measure existed.</p> <p>Scientists have reiterated that the most effective measures for reducing shark mortality are those that prevent the catch of sharks with fishing gear in the first place (see e.g. Tolotti et al., 2015) i.e. temporal and spacial closures of area with higher bycatch, especially where there are high numbers of juveniles, and limitations on problematic gears i.e. in this case a reduction in FAD sets.</p> <p>Neither the UoA or IOTC have these measures in place, and there is evidence that the UoA does not follow all the rules in place (see 2.3.2a above).</p>
<p>References</p> <p>2.3.2c</p>	<p>Tolotti MT, Filmalter JD, Bach P, Travassos P, Seret B, Dagorn L (2015). Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. <i>Global Ecology and Conservation</i> 4: 1-7. doi:10.1016/j.gecco.2015.05.003.</p> <p>Wallace BP., DiMatteo AD, Bolten AB et al (2010). Global conservation priorities for marine turtles. <i>PLoS ONE</i> 6(9): e24510. doi:10.1371/journal.pone.0024510.</p> <p>Wallace BP, Tiwari M, Girondot M (2013). <i>Dermochelys coriacea</i> (Southwest Indian Ocean subpopulation). The IUCN Red List of Threatened Species 2013: e.T46967863A46967866. http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T46967863A46967866.en.</p>

Scoring

Performance Indicator	2.3.2d ETP species management strategy - Implementation
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<p>Reason</p> <p>2.3.2d</p>	<p>The CAB scores this at 80: There is some evidence that the measures/strategy is being implemented successfully.</p> <p>The UoA does not meet 80 and there is no option for 60. There is little evidence for a cohesive, time bound strategy; and while there are some basic measures in place for some bycatch mortality reduction, there is little data available to assess their success and they do NOT “minimise” ETP mortality, they merely reduce it a little, especially with regard to sharks.</p>
<p>Supporting rationale and or evidence</p> <p>2.3.2d</p>	<p>As described in 2.2.2e and 2.3.2a above, the UoA has no cohesive strategy to minimise bycatch mortality and there are minimal measures in place to reduce the catch of ETP species.</p> <p>Those measures that are in place for the UoA, or the broader IOTC, do little to reduce bycatch or protect ETP species. The UoA measures are very focussed on releasing bycatch AFTER it is caught, and the CAB claims again that 50% of ETP species are released alive but this figure is meaningless without post-release mortality rates, especially for silky sharks.</p> <p>The CAB also claims, again, that the reduction in sea turtle bycatch is due to the use of non-entangling FADs but again has little data to back up the claim, but it could, at least in part, be due to a decline in sea turtles in the region (see 2.3.2c above).</p> <p>There is evidence that Echebatar does not follow the few rules that <u>are</u> in place. The removal of two <i>Carcharhinus longimanus</i> (OWT sharks) to the kitchen is a NOT a good indication that the UoA is doing everything to release sharks alive, and the apparent retention of two OWT sharks is in breach of IOTC Resolution 13/06. The CAB, at the very least, needs to show that this incident was investigated and provide a legitimate explanation if there is one.</p> <p>Finally, we reiterate that the UoA might well implement the measures for non-entangling FADs and improved bycatch release procedures, but there is no evidence that the UoA is planning to reduce bycatch by reducing FAD numbers or FAD sets. There is no evidence they will reduce or avoid sets on entangling FADs from other vessels, and no evidence of a monitoring plan if such a measure existed.</p>

Scoring

Performance Indicator	2.3.2e ETP species management strategy - Review of alternative measures
Reason 2.3.2e	<p>The CAB scores this at 100: There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of all secondary species, and they are implemented, as appropriate</p> <p>SG 80 is: There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA related mortality of ETP species and they are implemented as appropriate.</p> <p>SG 60 is: There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA related mortality of ETP species.</p> <p>SA 3.5.3.1 (FCR, p.140) defines states that the term alternative measures as: <i>“shall be interpreted by the team as alternative fishing gear and/or practices that have been shown to minimise the rate of incidental mortality of the species or species type to the lowest achievable levels”</i>.</p> <p>Neither SG100 nor SG80 are met as alternative measures are NOT implemented as appropriate, there is no evidence that the CAB has considered these or other “alternatives” or considered if they are “appropriate”.</p> <p>SG60 could be met as there have been reviews on the cause of increased bycatch by purse seiners, i.e. setting on FADs instead of free schools, and there are reviews of the potential effectiveness and practicality of alternative measures to minimise FAD-related mortality of unwanted catch. However, there is no evidence that the CAB has considered these or other “alternatives” or considered if they are “appropriate”.</p>

Supporting rationale and or evidence

2.3.2e

1. The most effective measures for reducing mortality of non-target species are those that prevent the interactions with fishing gear in the first place. This could include temporal and spacial closures of areas with higher bycatch (see e.g. Tolotti et al., 2015) such as for juvenile silky sharks, as well as gear modifications and limitations on using problematic gear types, such as the seasonal FAD bans and FAD set limits used in the Western and Central Pacific.

2. Setting on free schools has significantly lower bycatch than FAD sets. As the CAB shows throughout the report in its comparison of bycatch in both set types, the most effective way to reduce bycatch in the purse seine nets is to set on free schools, not on FADs.

We do not currently have data that would allow temporal or area closures to avoid ETP species or ways to prevent threatened species like silky sharks from being attracted to FADs, or success in releasing the majority of them safely from the purse seine nets before brailing, or for releasing them alive from deck with a high rate of survival. Therefore, reducing the number of FAD sets is currently the only available practical and simple option to reduce bycatch mortality.

3. The few positive changes made by the UoA with regard to FAD design and bycatch release are undermined by the dramatic increase in the number and proportion of sets on FADs. The introduction of non-entangling FADs that have no netting attach beneath the FAD will certainly reduce the number of deaths of silky sharks and turtles entangled under FADs. In addition the changes made by the UoA to encourage safe release of bycatch is a useful step. However, being caught in purse seine nets when they set on FADs remains a significant cause of mortality for non-target species, especially for more sensitive and threatened species like silky sharks.

While improvements to the release of bycatch is certainly a valuable part of the process, for sensitive species like silky sharks, it is far too late to release them after capture due to their very high post-release mortality rate. Throughout the scientific literature the mantra has been the same - the best way to protect sharks is not to catch them in the first place. Measures must focus first on reducing interactions with fishing gear, and then on safe release as early as possible in the process for those that do get caught.

Observer data clearly shows that between 2014 and 2016 the UoA more than doubled its total number of sets, from 804 to 1700. Free school sets declined from 237 to 190, while FAD sets increased from 567 to 1510 sets. FADs sets went from 71% to 89% of total sets in 3 years (Table 21, p40 Final report v2). So not only is the UoA not applying the most effective reduction measures, they are knowingly increasing use of the set type that takes more bycatch.

<p>Supporting rationale and or evidence (continued)</p> <p>2.3.2e</p>	<p><u>4. The UoA uses more FADs than many other fleets.</u> The CAB likes to highlight the fact that Echebatar set their own limit to 375 active FADs at anyone time, but provides no information on how this compares to the rest of the fleets. Like the rest of the Spanish-owned vessels, Echebatar uses a large number of FADs, which is why the UoA needs a special supply vessel to carry them. It is easy to see who are the big FAD users - of 23 supply vessels registered in IOTC in 2017 13 were flagged to Spain, 7 to Seychelles and just one each to France, Mauritius and Korea (data available by year on IOTC website, or see Greenpeace 2017). IOTC measures that limit the numbers of FADs and supply vessels only really impacted these fleets - others can still increase the number of FADs they use, and there are NO limits to the number of FAD sets made.</p> <p><u>5. The CAB provides no analysis of how often the UoA sets on FADs from other vessels,</u> what kind of FADs these are or their impacts, and gives no evidence for how this can or will be monitored with regard to the UoA.</p>
<p>References</p> <p>2.3.2e</p>	<p>Greenpeace (2017). Supply vessels in the Indian Ocean. IOTC-2017-S21-Inf03 http://www.iotc.org/documents/supply-vessels-operating-indian-ocean</p> <p>IOTC vessel registry: http://www.iotc.org/vessels</p> <p>Tolotti MT, Filmalter JD, Bach P, Travassos P, Seret B, Dagorn L (2015). Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. <i>Global Ecology and Conservation</i> 4: 1-7. doi:10.1016/j.gecco.2015.05.003.</p>

<h2 style="background-color: #0056b3; color: white; padding: 5px;">Scoring</h2>	
<p>Performance Indicator</p>	<p>2.3.3a ETP species information - information adequacy for assessment of impacts</p>
	<p>The CAB scores this at 80: Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species. (There is an alternative if the MSC's risk based framework is used to score PI 2.3.1, which it is not.)</p> <p>The SG60 is: Qualitative information is adequate to estimate the UoA related mortality on ETP species.</p> <p>The UoA does not meet SG80 as there is limited quantitative information available, and at best it can only estimate minimum likely UoA-related mortality. However, given there is very little information on the overall mortality from fishing, or the populations of ETP species, it is not possible to determine if the UoA, broader purse seine fleet, or overall fishery impacts.</p>

Supporting rationale and or evidence	<p><u>1. There is insufficient observer data available on UoA catches of ETP species.</u></p>
2.3.3a	<p>While the UoA has 100% observer coverage since 2014, not all of the data from these observers has been processed, so it is not available. The CAB claims that even so, the with the available observer data the UoA still exceeds recommended minimum observer coverage levels, such as the IOTC's recommendation for 25% coverage. However, recommendations by various science bodies and studies (e.g. Lawson 2006, Debski et al 2016) are for <i>representational</i> (by season, area, gear type, etc.) coverage of the entire fishery, and <i>over a reasonable timescale</i>. The bycatch data currently available for the UoA is clearly not representational, nor does it cover a reasonable timescale.</p> <p>The primary data on which the CAB makes its assessment is for a small subset of purse seine vessels. Of the five vessels currently in the fleet, just two years of observer data has been processed for two vessels, and three years of data for the other three vessels (see Table 19, p39, Final report v2). There is an additional two years of data (2014-2015) for a sixth vessel <i>Campolibre Alai</i> which was withdrawn from the fleet. The level of data processed for each vessel for 2016 ranged from just 21% to 52%.</p> <p>As mentioned in 2.3.1b above, there are significant variations in the numbers and proportions of different species caught - between sets on individual vessels, between the vessels, and between years. If you are missing 79% of your data for one of six of your vessels, as for <i>Euskadi Alai</i> in 2016, you could be missing a significant number high bycatch sets, and significantly underestimate bycatch mortality. This was highlighted by the fact that both bycatch rates and the proportions of FAD sets to free sets INCREASED between the time of the Certifiers Desk Review and the Second Report as more data was analysed. When the remaining data is analysed there will likely be further significant changes.</p>

Supporting rationale
and or evidence
(continued)

2.3.3a

2. Even with good observer data, bycatch rates are underestimated by both observers and logbooks.
Hutchinson et al (2015) stated: “*Comparison of the number of captured sharks observed by the scientific party and those reported by the vessel and fishery observer revealed that there are significant recording discrepancies regarding the number of sharks impacted by this fishery. We found catch rates were significantly underestimated by both the observer and the vessel logbook.*”

They noted this was not necessarily misreporting, but due to the particulars of catch-unloading and that fact that observers are occupied conducting the various catch sampling and estimation duties in addition to documenting all bycatch. They also noted significant differences between vessels: “*It is also worth noting that due to the variety of vessels in the tropical tuna purse seine fishery, loading and hold styles vary dramatically, and this should be taken into account when considering these estimates.*”

3. Data on shark entanglement is missing

A key cause of silky shark mortality is the entanglement under FADs. Filmlalter et al (2013) showed that much of this mortality is unseen as sharks died and fell out within two days. With such a high abundance of FADs in the Indian Ocean the study estimated that a silky shark has a 29% chance of surviving to age 1, 9% chance of survival to 2 years, and only a 3% chance of survival to 3 years old (Filmlalter *et al.* 2013).

There is no data for how often UoA sets on the standard, potentially entangling FADs released by other vessels. If the UoA is to continue setting on other FADs they must include an assessment of this mortality or have clear rules and monitoring in place to ensure they don't set on other FADs. There is no evidence that this is happening.

Supporting rationale and or evidence (continued)

2.3.3a

4. There is insufficient data available on populations of ETP species

There is insufficient data for total catches in the Indian Ocean fisheries, and there is not enough data to estimate populations of ETP species. Observer coverage requirements for IOTC are only 5% and for many fleets this is not met, and despite requirements, catch reporting and data collection for bycatch species is poor.

IOTC scientists have been unable to do stock assessments of key sharks species in the Indian Ocean, as noted in its silky shark update: *“Mechanisms need to be developed by the Commission to encourage CPCs to comply with their recording and reporting requirement on sharks, so as to better inform scientific advice.”* (IOTC 2016a). There are similar issues in other oceans where observer coverage and data collection is considerably better, such as the WCPFC where scientists had significant difficulties but have developed stock assessments for silky, oceanic white tip and blue sharks, but not others.

Similarly, the IUCN Shark Specialist team note in their assessment of silky sharks for the IUCN Redlist that *“In the Indian Ocean, there is no stock assessment or any reliable fishery indicators of status, therefore the stock status is highly uncertain”* (Rigby et al 2017).

The 2013 update of the IUCN listing for Leatherback lists the NE Indian Ocean sub-population as Data Deficient (Wallace et al 2013). In their assessment of the conservation status of spatially and biologically distinct marine turtle Regional Management Units (RMUs), Wallace et al (2011). highlighted problems with Indian Ocean data compared with other regions, stating: *“Specifically, among Indian Ocean RMUs, data uncertainty was frequently scored as high for both risk (eight of 17 RMUs scored) and threats (seven of 18 RMUs scored), while no more than three RMUs in the other ocean basins had high data uncertainty scores.”*

The IOTC notes in its 2016 update on sea turtles: *“Resolution 12/04 On the conservation of marine turtles includes an annual evaluation requirement (para. 17) by the Scientific Committee (SC). However, given the lack of reporting of marine turtle interactions by CPCs to date, such an evaluation cannot be undertaken. Unless IOTC CPCs become compliant with the data collection and reporting requirements for marine turtles, the WPEB and the SC will continue to be unable to address this issue.”* (IOTC 2016b)

Supporting rationale
and or evidence
(continued)

2.3.3a

5. There is limited data on ETP species biology

Management of ETP species, especially those with high post-release mortality like silky sharks, should focus on preventing capture and include small scale measures such as temporal and spatial closures as well as large scale regulations (Tolotti *et al.* 2015). However there is currently insufficient data to determine where and when these closures should be in the Indian Ocean.

Conclusions

With such a range of issue evident in the available observer data, it is clear that a full analysis of all available observer data is needed to draw reasonable conclusions, with vessel-by-vessel analysis, as well as a longer time series, in order to fully understand the level of mortality attributed to the UoA.

Current ETP estimates can only be considered a minimum catch, which is insufficient to determine UoA impacts or the suitability and success of management measures for bycatch mortality reduction.

IOTC-wide collection and analysis of bycatch data in order to assess population must be improved in order to assess fishery impacts and the suitability of measures aimed at reducing mortality.

<p>References</p> <p>2.3.3a</p>	<p>Debski I, Pierre J, Knowles K (2016). Observer coverage to monitor seabird captures in pelagic longline fisheries. WCPFC-SC12-2016/EB-I-07. https://www.wcpfc.int/node/27463</p> <p>Filmalter JD, Capello M, Deneubourg JL, Cowley PD, Dagorn L (2013). Looking behind the curtain: quantifying massive shark mortality in fish aggregating devices. <i>Front in Ecol Environ</i> 11(6): 291-6. https://www.esa.org/esa/documents/2013/08/frontiers-in-ecology-august-2013.pdf</p> <p>Hutchinson MR, Itano DG, Muir JA, Holland KN (2015). Post-release survival of juvenile silky sharks captured in a tropical tuna purse seine fishery. <i>Mar Ecol Prog Ser</i>; 521: 143-54. http://www.int-res.com/articles/meps_oa/m521p143.pdf</p> <p>IOTC (2016a). Executive summary: Silky sharks. Status summary for species of tuna and tuna-like species under the IOTC mandate, as well as other species impacted by IOTC fisheries. Indian Ocean Tuna Commission. http://iotc.org/sites/default/files/documents/science/species_summaries/english/Silky%20shark%20Executive%20Summary.pdf</p> <p>IOTC (2016b). Executive summary: Marine turtles. Status summary for species of tuna and tuna-like species under the IOTC mandate, as well as other species impacted by IOTC fisheries. Indian Ocean Tuna Commission. http://iotc.org/sites/default/files/documents/science/species_summaries/english/Marine%20turtles%20Executive%20Summary.pdf</p> <p>Lawson T (2006). Scientific aspects of observer programmes for tuna fisheries in the western and central Pacific Ocean. WCPFC-SC2-2006/ST WP-1. https://www.wcpfc.int/node/1716</p> <p>Rigby CL, Sherman CS, Chin A, Simpfendorfer C (2017). <i>Carcharhinus falciformis</i>. The IUCN Red List of Threatened Species 2017: e.T39370A117721799. http://www.iucnredlist.org/details/39370/0</p> <p>Tolotti MT, Filmalter JD, Bach P, Travassos P, Seret B, Dagorn L (2015). Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. <i>Global Ecology and Conservation</i> 4: 1-7. doi:10.1016/j.gecco.2015.05.003.</p>
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References (continued)

2.3.3a

Wallace BP, DiMatteo AD, Bolten AB et al (2011). Global conservation priorities for marine turtles. PLoS ONE 6(9): e24510. doi:10.1371/journal.pone.0024510. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0024510>

Wallace BP, Tiwari M, Girondot M (2013). *Dermochelys coriacea* (Southwest Indian Ocean subpopulation). The IUCN Red List of Threatened Species 2013: e.T46967863A46967866. <http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T46967863A46967866.en>.

7. Additional Information

7.1 Objection in line with PD2.7.3

Please ensure you have filled in your [contact details \(Section 2\)](#) and [objections category \(Section 3\)](#) before filling in this section.

Using the template below, please list all additional information not forming part of the record (as defined in [PD2.6.5.1](#)) that is relevant to the circumstances at the date of the determination that you feel has not been considered. Be sure to provide the reasons why you or your organisation believes that the particular information in question:

- a. Was known or should reasonably have been known to any party to the assessment process;
- b. Should reasonably have been made available to the CAB; or,
- c. If considered, could have been material to the determination or the fairness of the assessment.

Additional Information

Please identify...

Information

We note that the CAB is rather selective in what information it discusses from particular papers referenced, and what it leaves out, to justify its scoring. These are key examples.

1. There is a major flaw in the CABs analysis of the FAD numbers used by the UoA.

The CAB states throughout the report that 5 purse seiners comprising the UoA each use 400 active FADs per vessel, to a total of 2000 FADs. They estimate the number lost annually by the UoA is 20% or 400 FADs, and they cite one study by Maufroy et al (2015) which estimates about 10% of FADs end up grounding somewhere in the Indian Ocean. The CAB then concludes therefore that the UoA may lose 400 FADs of which about 200 ground, with some of these arriving on coral reefs.

However, each vessel has **400 active FADs at anyone time** - that is FADs with active tracking buoys on them - but the total FADs with buoys released per year can be twice this number. The IOTC Resolution 16/01 on an interim plan on rebuilding the stock allows “no more than 425 active instrumented buoys and **850 acquired annually** instrumented buoys per purse seine vessel.” That is, at any one time vessels can be monitoring no more than 425 FADs, but over the year they can release 850 FADs with active trackable buoys.

Also, there is no limit on how many other non-instrumented FADs each vessel can release, nor on how many other vessel's FADs they can set on, so any estimates based on instrumented buoys are a minimum estimate at best and will vastly underestimate potential impacts of FAD use and FAD loss. FADs do not cease to be the responsibility of the vessel once they are lost or inactivated, and any FADs set of, no matter the owner, should be considered part of the UoA's impact.

Using the UoAs self-imposed annual limit of 750 per vessel (mentioned on page 47 of the Final Report), or 3750 for the whole UoA, and assuming the 10% figure for FADs grounding is correct, then at least 375 will ground.

Even applying current Resolution 17/01 rules (FAD limits were adjusted in May 2017 to 350 active and 700 annually - information available to the CAB before the Second Report), then each vessel releases up to 700 annually, and the UoA releases 3500 FADs annually, of which about 350 will ground on reefs, beaches, seagrasses and other areas.

The CAB compounds these errors when it makes some very crude estimates based on the incorrect figures above, on how many FADs would end up on coral reef on an annual and 5-yearly basis stating:

"If 1,000 lost FADs impact Indian Ocean coral reefs over a five year period, the estimated total area of impact would be 100,000 m² or 0.1 km² based on an estimated individual impact area of 100m² per FAD. With a total area of coral reefs in the Indian Ocean of 32,000 km² the proportion of coral reefs impacted by FADs in a 5 year certification period is less than 0.001% of the total coral reef area. Accordingly, while FAD impact on coral reefs is important on a localized basis, overall it is not a significant issue in terms of coral reef ecosystem impacts in the Indian Ocean."

Aside from the fact this does not consider the cumulative impacts of all the fleets using FADs, uses the incorrect estimates for the UoA FAD numbers, and does not consider the impacts of FADs released by other vessels and used by the UoA, it also gives no real consideration to the impact of ocean currents or specific areas of operation for the fleet despite evidence that this is a problem that the CAB knows about but doesn't mention.

2. The CAB has seen evidence that local impacts of FADs are significant and that many FADs from a few fleets can have a significant impact, but it is not mentioned.

The CAB cites the report from ICS on FADs entangled on atolls (Balderson & Martin, 2016), but does not give the contents much consideration despite the fact it clearly shows their assumptions about distribution of lost and abandoned FADs are flawed.

In 2015, Island Conservation Society (ICS) in the Seychelles surveyed St François and Farquhar atolls and found 48 FADs on each entangled on the coral reef, on seagrass or sand flats, or beached. That's 96 FADs on just two atolls. With the addition of other FADs found since 2011, as they went about their conservation work, the total number of beached or entangled FADs they found was 210. 76% of the FADs found were deployed and lost by Spanish and Seychelles-flagged vessels, all of which are owned by Spanish companies including Echebaster - three of the FADs on St François were from *Alakrana*.

This makes it clear that FAD impacts by a small number of fleets can be substantial in one area, and that multiple FADs from a single vessel can end up in one small area.

3. The CBA provides no information or discussion on the issue of the UoA having its AIS switched off.

Both SHARKPROJECT and WWF noted in their comments on the Second Report (see p283 and 303 of Final Report v2) that Echebatar vessels switch off AIS for the majority of time that they are in the fishing grounds. SHARKPROJECT provided images of AIS vessel tracks for two Echebatar vessels (page 296 of Final Report v2).

As WWF notes “We are aware of the potential security issues on the East African coast, however, this information cannot be disregarded and should be made available at all times. AIS is an important surveillance tool for several coastal states that do not have full VME coverage (for example Tanzania). Several other fishing fleets (e.g. Japan, China, Taiwan) in the region have their AIS turned on.”

The CAB states in its response to SHARKPROJECT that the traceability section has been redrafted but there is not mention of this issue.

To WWF the CAB response was simply: “Certainly, after acknowledging that there are potential security issues on the eastern coast of Africa, WWF would understand turning off AIS, if pirates are using AIS to target ships?”

Given this is a major issue with regard to transparency, traceability, and implementation of regulations by the UoA, we would expect more analysis of by the CAB to determine whether the UoA is legitimately turning off the AIS, why they see this as necessary for almost the entire time given that other fleets have theirs turned on, how this is recorded in logbooks, how this is checked by various authorities, etc. We would expect the analysis to be reflected in relevant scores.

<p>Reason why information was known or should reasonably have been known</p>	<p>1. Resolution 16/01 cited many times by the CAB, so they should have known about the total annual numbers. The UoA will have known all of this, as would anyone working in the IOTC. The updated resolution 17/01 was agreed in the IOTC Commission meeting in May, just after the site meetings in Seychelles, and was available well before the Second Draft.</p> <p>2. The information on local atoll impacts was within the ICS (Balderson & Martin 2016) report cited by the CAB. The survey data spreadsheets on which fleets FAD buoys could be traced to could be requested from the ICS. Greenpeace, which funded the 1st year of the survey work, also had a copy of the St Francois atoll survey.</p> <p>Balderson S, Martin (2016). Environmental impacts and causation of 'beached' drifting fish aggregating devices around Seychelles islands: A preliminary report on data collected by Island Conservation Society. IOTC-2015-WPEB11-39. http://www.iotc.org/documents/environmental-impacts-and-causation-%E2%80%98beached%E2%80%99-drifting-fish-aggregating-devices-around</p> <p>ICS survey data excel sheet attached.</p> <p>3. Both SHARKPROJECT and WWF noted in their comments on the Second Report (see p283 and 303 of Final Report v2) that Echebatar vessels switch off AIS for the majority of time that they are in the fishing grounds. SHARKPROJECT provided images of AIS vessel tracks for two Echebatar vessels (page 296 of Final Report v2).</p>
<p>Reason why information could have been material to the determination or the fairness of the assessment.</p>	<p><u>Points 1 & 2:</u> The assessment made the FAD impacts look much less than they really are, would likely have given the CAB support for scoring a variety of indicators higher than they should have. It may have given stakeholders and reviewers with less knowledge on the issues a sense of confidence in higher scores. If nothing else the information should be corrected for any future reference.</p> <p><u>Point 3:</u> Given this is a major issue with regard to transparency, traceability, and implementation of regulations by the UoA, we would expect more analysis of by the CAB to determine whether the UoA is legitimately turning off the AIS, why they see this as necessary for almost the entire time given that other fleets have theirs turned on, how this is recorded in logbooks, how this is checked by various authorities, etc. We would expect the analysis to be reflected in relevant scores.</p>