



Fisheries Standard Review

Supporting the prevention of gear loss and ghost fishing

Impact Assessment Report

November 2021

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The views and opinions expressed in this report do not necessarily reflect the official policy or position of the Marine Stewardship Council. This is a working paper, it represents work in progress and is part of ongoing policy development. The language used in draft scoring requirements is intended to be illustrative only, and may undergo considerable refinement in later stages.

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1. Impact Assessment Report – Overview

1.1. Introduction

This version of the impact assessment is formally known as IA (2) and represents the latest iteration of the policy impact assessment. It incorporates feedback from MSC governance groups (MSC Board of Trustees, TAB and STAC – December 2020/January 2021), pilot testing (June 2021) and public consultation (July 2021). This report should be read in conjunction with previous iterations of the impact assessment IA (0) and IA (1) which were undertaken over 2019/2020. Further information on policy options initially developed and their evaluation against our impact assessment framework is considered therein. These are included in Appendix 1.

1.2. Impact Assessment Framework

The aim of impact assessment is to provide clear information on the impacts of the options developed to sort out the policy issues identified in the project inception. It serves as a basis for comparing options against one another and against the business-as-usual scenario, and identify a preferred option if possible. It does not replace decision-making but is used as a tool to support the decision-making process and underpin evidenced based decision-making; increasing transparency, making trade-offs visible and reducing bias.

Impact assessment should help to:

- Specify how proposed options will tackle the identified issues and meet objectives
- Identify direct and indirect impacts, and how they occur
- Assess impacts in both qualitative and quantitative terms.
- Help find perverse or unintended consequences before they occur.
- Where possible, make risks and uncertainties known.

This is achieved by following MSC's Impact Assessment Framework that outlines when and how to undertake Impact Assessment. This ensures an efficient, systematic and consistent approach to policy development to underpin a responsive, robust and credible program. In particular, the Impact Assessment Framework defines the different types of impact (see below) and a suite of methodologies best suited to assessing each type.

The impact types used in the Impact Assessment are defined as follows:

1. **Effectiveness:** The extent to which the change is deemed likely to be successful in producing the desired results and resolving the issue(s) originally identified.
2. **Acceptability:** The extent that the change is considered tolerable or allowable, such that the MSC program is perceived as credible and legitimate by stakeholders.
3. **Feasibility:** The practicality of a proposed change and the extent to which a change is likely to be successfully implemented by fisheries within a given setting and time period.
4. **Accessibility & Retention:** The extent to which the change affects the ability of fisheries (both currently certified and those potentially entering assessment in the future) to achieve and maintain certification (i.e. changes in scores, conditions and pass rates).
5. **Simplification:** The extent to which the change simplifies and does not further complicate the Standard such that it can be easily and consistently understood and applied.

- 6. Auditability:** The extent to which the change can objectively be assessed by Conformity Assessment Bodies (CABs) and Accreditation Services International (ASI) to determine whether the specified requirements are fulfilled, and CABs can provide scores.

The Impact Assessment report presents the results of this process, whereby each of the options for proposed changes to the Fisheries Standard are tested to understand their potential effects across the six defined impact types.

1.3. Problem statement

Concerns were raised by the Executive and stakeholders that the way the impact of Ghost Gear is operationalised in the Standard leads to implicit and inconsistent consideration of the issue in fisheries assessments, leading to outcomes which may not demonstrate effective Ghost Gear strategies.

In the first phase of the FSR the MSC Executive established that Ghost Gear impact consideration by Conformity Assessment Bodies (CABs) applying the Standard has been inconsistent, absent and incorrect. Additionally, assessment outcomes related to Ghost Gear mitigation have not aligned with advances in best practice management.

To address this and to better encourage ‘change on the water’, there should be more explicit consideration of Ghost Gear impacts and the promotion of effective gear loss avoidance strategies and mitigation actions.

1.4. Objectives

The objective is to revise the MSC Standard to deliver the following outcomes:

- i) the consideration of Ghost Gear impact needs to be explicit in fishery assessments.
- ii) the promotion of the implementation of gear loss avoidance strategies and mitigation actions in certified fisheries.

2. Policy options

Option 0 is a business-as-usual scenario.

The ‘business-as-usual’ scenario considered here would see no change to the Standard’s requirements or guidance. The obligation to understand and address impact of lost gear would remain driven through Guidance (see Guidance Box GSA 7, MSC Fisheries Standard 2.01).

Option 1 is our preferred policy option

Option 1 is our preferred option. It resolves the issues via i) revision of Principle 1 requirements to explicitly include consideration of impact of ghost gear and ii) the introduction of a new scoring issue (SI) requiring fisheries implement a management strategy to minimise ghost gear (including lost or discarded Fish Aggregation Devices) and its impact on Principle 2. This SI is structurally similar to the ‘measures/partial strategy/strategy’ clauses and would be replicated within ETP and Habitats components. Best practice is clarified through new guidance and definitions.

Detailed proposal

Summary

- The requirements for Principle 1 of the standard have been revised to make the consideration of ghost gear impact more explicit. This change is focussed on the P1 management clause (SA2.4.8) to make it clear that the impact of ghost fishing on the target fishery needs to be managed.
- New requirements have been added to Principle 2 requiring fisheries to implement a strategy to minimise gear loss and the impact of ghost gear on the environment. These requirements are in the form of 2 new “scoring issues” replicated across the P2 components of Habitats and ETP – in situations where ETP is not scored the new scoring issue will be required to be scored within Primary scoring component. The need to implement strategies to minimise ghost gear and its impact will be based on whether it impacts any of these components.
- There is an update to a P2 requirement clause (SA3.1.8) to make clear that ghost fishing impacts on all P2 species need to be considered (e.g. Primary, Secondary and ETP).
- New guidance has been added which clarifies best practice with respect to ghost gear management and how different types of management measures could be scored.
- A number of new terms and concepts are defined to clarify how ghost gear impact should be assessed. In this context, the definition of ghost gear is extended to included fish aggregation devices (FADs).

1.1 Principal 1 Revisions

It is proposed to consider the impact more explicitly from ghost fishing in clauses that relate to the assessment and documentation of the use of alternative measures to minimise the mortality of unwanted catch.

In this context the following proposal is made:

- *SA2.4.8 Scoring issue (f) requires that UoAs review whether the use of alternative measures could reduce the mortality arising from unwanted catches from the target stocks, including mortality from ghost fishing.*

1.2. Principal 2 Revisions

It is proposed that a new scoring issue, to explicitly consider how the impacts of ghost gear are being managed in the fishery, be added to assessments under Principle 2. This would be scored in relation to two Principle 2 components: Habitats, and Primary Species or Endangered, threatened or protected (ETP) species. In situations where ETP scoring component is not scored it would be

The new scoring issues will be drafted as follows:

Principle 2 component	Performance indicator	Scoring issue	Scoring guideposts (SG)		
			SG 60 Minimum acceptable	SG 80 Best practice	SG 100 State of the art
[Primary species]	[2.1.2]				
ETP species	2.3.2	Ghost gear management strategy	There are measures in place, if necessary that are expected to minimise ghost gear and its impact on [insert scoring component].	There is a partial strategy in place, if necessary, that is expected to minimise ghost gear and its impact on [insert scoring component].	There is a strategy in place that is expected to minimise ghost gear and its impact on [insert scoring component].
Habitats	2.4.2				

The definitions of measures, partial strategy and strategy comply with the existing definitions provided in Principle 2 (see Table SA8. Principle 2 Phrases).

“Measures” are actions or tools in place that either explicitly manage impacts on the component or indirectly contribute to management of the component under assessment having been designed to manage impacts elsewhere.

A “partial strategy” represents a cohesive arrangement which may comprise one or more measures, an understanding of how it/they work to achieve an outcome and an awareness of the need to change the measures should they cease to be effective. It may not have been designed to manage the impact on that component specifically.

A “strategy” represents a cohesive and strategic arrangement which may comprise one or more measures, an understanding of how it/they work to achieve an outcome, and which should be designed to manage impact on that component specifically. A strategy needs to be appropriate to the scale, intensity and cultural context of the fishery and should contain mechanisms for the modification fishing practices in the light of the identification of unacceptable impacts.

A number of changes are proposed to existing requirement language to clarify application of the new scoring issue, including further new definitions. The main changes are as follows (underlined):

- The definition for the phrase “If necessary” in Table SA8 (FSR v2.01) would be changed to: *The term “if necessary” is used in the management strategy PIs at SG60 and SG80 for the primary species, secondary species, habitats and ecosystems components. This is to exclude the assessment of UoAs that do not impact the relevant component at these SG levels. In the case of ghost gear, this refers whether or not the risk of ghost fishing or ghost gear impacts are either demonstrably absent or negligible.*
- New requirements are added to clarify the meaning of term “minimise” and “negligible” as follows:

- Minimise” shall be interpreted by the team as reduction of ghost gear and its impact to the point where the risk of ghost fishing or ghost gear impacts are either demonstrably absent or negligible.
- The team shall use their expert judgement in determining what is “negligible” when making a determination as per [new requirements]. In this context the team should consider the significance of the ghost gear risk in relation to the prevalence of ghost gear and vulnerability of species or habitats at risk of ghost gear impact
- Revision is proposed to Principle 2 General Requirements SA3.1.8 as follows: The consideration of the impact of the UoA on all components in P2, including unwanted catch, shall include mortality that is observed and mortality that is unobserved (including mortality from ghost fishing).

1.3. New definitions and guidance supporting the application of proposed changes to Principle 1 and Principle 2.

The following definitions (adapted from FAO Voluntary Guidelines on the Marking of Fishing Gear¹) are to be used when considering ghost gear and its impacts:

Ghost fishing: the capture and/or entanglement of target, non-target and ETP species by ghost gear.

Ghost fishing mortality: the mortality of organisms arising from the entrapment, entanglement, or other physical interactions with ghost gear.

Ghost gear: fishing gear or parts thereof (including fish aggregating devices) that are abandoned, lost, or discarded at sea. This is more formally referred to as ‘Abandoned, Lost or Discarded Fishing Gear’ (ALDFG).

Abandoned fishing gear: fishing gear over which that operator/owner has control and that could be retrieved by owner/operator, but that is deliberately left at sea due to force majeure or other unforeseen reasons.

Discarded fishing gear: fishing gear that is deliberately released at sea without any attempt for further control or recovery by the owner/operator.

Lost fishing gear: fishing gear over which the owner/operator has accidentally lost control and that cannot be located and/or retrieved by the owner/operator.

Ghost gear impact: environmental impacts resulting from ghost gear, including ghost fishing and/or its physical impact on habitats.

Fish aggregating device (FAD): refers to a permanent, semi-permanent or temporary object, structure, or device of any material, man-made or natural, which is deployed, and/or tracked, and used to aggregate fish for subsequent capture. A FAD can be either an anchored FAD (aFAD) or a drifting FAD (dFAD). For the purpose of MSC assessment, FADs are not considered a gear type as such because they do not capture fish, but merely facilitate subsequent capture. FADs therefore maybe included as a functional part of

¹ FAO (2019). *Voluntary Guidelines on the Marking of Fishing Gear. Directives volontaires sur le marquage des engins de pêche. Directrices voluntarias sobre el marcado de las artes de pesca. Rome/Roma. 88 pp. Licence/Licencia: CC BY-NC-SA 3.0 IGO.*

certain fishing gear types (e.g., purse seine, handline) as they are sometimes used to facilitate the capture efficiency of these gears.

Fishing gear: fishing gear is a tool with which living aquatic resources are captured. This refers to any physical device, or part thereof, or combination of items, that may be placed on or in the water or on the seabed with the intended purpose of capturing or facilitating the capture, or harvesting of marine organisms, in accordance with MARPOL Annex V.

Whilst it's recognised that some ghost gear is a challenge to completely eliminate (e.g. gear loss from severe storms), it's the MSC intent that fisheries aim to minimise ghost gear and its impact on marine ecosystems as much as possible.

Various approaches can be taken to manage ghost gear and its impacts. As proposed by McFadyen et al. (2009²), interventions can be broadly divided between measures that prevent (avoiding the occurrence of ghost gear in the environment); mitigate (reducing the impact of ghost gear in the environment) and remediate (removing ghost gear from the environment). These include but are not limited to those within the table below (Table xx):

Table 1

Type of intervention	Example of measures
Prevention	<ul style="list-style-type: none"> • Marking and identification of fishing gear • Spatial and/or temporal measures to reduce gear conflict • Fishing input controls to limit gear use (e.g. limits on soak time for passive gear types) • Gear design to reduce whole or partial loss of the fishing gear • Vessel design to reduce gear and other aquatic litter discarding • Use of end-of-life fishing gear disposal facilities • Fisher education and awareness on preventing gear loss
Mitigation	<ul style="list-style-type: none"> • Gear design to reduce the incidence and duration of ghost fishing
Remediation	<ul style="list-style-type: none"> • Lost gear reporting, location and recovery initiatives

When considering approaches to managing ghost gear and its impacts, the assessment team should consider current best practice, referring to FAO (2009) for basic principles, the FAO (2019) 'Voluntary Guidelines on the Marking of Fishing Gear'³ and the revised 2021 Global Ghost Gear Initiative (GGGI) 'Best

² McFadyen, G., T. Huntington, and R. Cappell (2009). *Abandoned, lost, or otherwise discarded fishing gear*. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p

³ FAO (2019). *Voluntary Guidelines on the Marking of Fishing Gear*. Directives volontaires sur le marquage des engins de pêche. Directrices voluntarias sobre el marcado de las artes de pesca. Rome/Roma. 88 pp. Licence/Licencia: CC BY-NC-SA 3.0 IGO

Practice Framework for the Management of Fishing Gear'⁴. For examples of best practices with respect to mitigating ghost gear impacts from lost or discarded FADs refer to 2019 International Seafood Sustainability Foundation (ISSF) 'Recommended Best Practices for FAD Management in Tropical Tuna purse seine fisheries'⁵.

It is widely accepted that prevention is better than mitigation or remediation of ghost gear impacts. It is the intent of the MSC to promote effective gear loss avoidance strategies and therefore it is expected that measures should include one or more preventative measures at SG60. It is expected that a partial strategy should include more than one measure that work together to prevent ghost fishing by the UoA whilst a strategy may also include mitigation and remedial measures to address ghost fishing by the UoA.

3. Summary of impacts

The following provides a summary of the findings of all of the impact assessment activities informed through consultation and analysis.

Option 0 is a business-as-usual (BAU) scenario. The main issue here is ghost gear impacts are addressed indirectly through vague guidance leading to incorrect and ineffective outcomes, outcomes not reflective of advances in best practice management.

Option 1 is our preferred option. It resolves all issues principally through requiring a dedicated management strategy informed through information about impact and best practice. All issues raised during consultation and pilot testing have been addressed through revisions to the proposals. This option is the very effective at meeting our policy objectives so is very acceptable to stakeholders. The option will strengthen audibility (relative to BAU) and set clear expectations for fisheries seeking recertification and entering the programme. Further, whilst emphasising that fisheries implement best practice (e.g., ghost gear preventative measures), the option avoids prescription so is scalable and thus feasible for fishery partners. The option suffers very slightly from adding complexity via new scoring issues and there are some minor accessibility concerns for jurisdictions who don't manage ghost gear, including FADs, however this is offset by the improvement in fishery outcomes.

4. Impact assessment: in-depth analysis

The impact assessment presented in the table below was based on expert judgement of the project and outreach leads, feedback provided by outreach co-readers, responses to a public consultation webinars and survey and the findings of consultants (Poseidon). Any impact type considered significant was subject to further analysis which is provided in further sections below.

⁴ *Global Ghost Gear Initiative (2021) Best Practice Framework for the Management of Fishing Gear: June 2021 Update. Prepared by Huntington, T. of Poseidon Aquatic Resources Management Ltd. 94 pp plus appendices*

⁵ *Restrepo, V., H. Koehler, G. Moreno and H. Murua (2019). Recommended Best Practices for FAD management in Tropical Tuna Purse Seine Fisheries. ISSF Technical Report 2019-11. International Seafood Sustainability Foundation, Washington, D.C., USA*

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
Effectiveness	<i>Is the change effective at meeting the MSC's intent?</i>	No. The implicit nature of GG criteria mean that assessments do not consider this issue effectively. The analysis (2018/2019) has demonstrated this.	Yes. Both objectives would be supported given they would be explicitly assessed and scored. Best practice management (prevention and mitigation) would be driven through specific guidance. The proposal is scalable given the flexibility of approaches to ghost gear management prescribed. In general, a significantly clearer improvement pathway relative to BAU. The addition of "if necessary" clauses will direct mitigation effectively to fisheries with ghost gear challenges, avoiding broad costly and potentially unnecessary application across the entire programme. The focus of the new management scoring issues to ETP and habitats will ensure that the most "at risk" environmental receptors are subject to ghost gear mitigation. This part of the proposal will also reduce complexity and duplication raised as a concern through pilot testing. The inclusion of FADs within the definition of ghost gear represents an increase in "effectiveness" given the Ghost Gear impacts FADs are known to elicit on ecosystems.
	<i>The option seems effective at resolving the issue(s) consistently and reliably.</i>	<i>1 = Completely disagree</i>	<i>5 = Completely agree</i>
Acceptability	<i>Is the change acceptable to stakeholders?</i>	The majority of stakeholders would not find the BAU acceptable though a few would: a few stakeholders would not consider this impact as critical as others for example (e.g. as there is an	Initial consultation 2020 reflected broad support for move to consider ghost gear impact more explicitly (38/44 survey respondents). Some polarity amongst NGOs (6/7) and fishing industry reps (5/6), with the latter preference for non-

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
		<p>economic incentive to keep ALDFG impacts low there isn't necessarily the justification to address this need within the standard).</p> <p>The survey demonstrated (38/44 who responded to q) that most stakeholders supported a more explicit consideration of GG impacts . This shows that the BAU would likely be unacceptable.</p>	<p>normative changes and the former normative.</p> <p>Most recent 2021 consultation revealed that most stakeholders supported new ghost gear management scoring issue (29/35 ~ 86%); most stakeholders agreed that the proposal would make the treatment of ghost gear more explicit (31/35 ~ 89%) and the majority of stakeholders (ca. 80%) supported inclusions of FAD management in scope of the ghost gear proposal.</p> <p>In general, NGOS, supply chain actors, academics and CABs reflected positive sentiment towards proposals. This was linked to acknowledgement of advances in recognition of ghost gear impact and mitigation.</p> <p>Reactions from CABs involved with pilot testing were mixed – where there was negative sentiment this related to duplication and ambiguity. In response to pilot testing, the Executive has made changes to improve auditability and reduce complexity – chief among these changes were a removal of requirement directing CABs to consider P1 stock status impact from ghost gear. This change was perceived to add significant complexity (e.g. assessment of all stock impact from ghost gear) without significant benefit given that such impact would otherwise be highlighted within stock assessments. This change would better align with changes to P2 and improve auditability of this issue. This change would ultimately improve acceptability of the proposal with CABs.</p>

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
			In general fishery representatives reflected negative sentiments towards proposals. This was linked to factors like the repetition of new requirements; perceived ambiguity of some of the proposed requirement language, costs of improvements impacting accessibility and retention; and the increased objection risks.
	<i>The option seems acceptable to stakeholders</i>	<i>2 = Disagree</i>	<i>3 = Neither agree nor disagree</i>
Feasibility	<i>Is the change feasible to fishery partners?</i>	Yes. No change represents no additional action/measure required by fishery partners. This would be highly feasible position for some fishery partners.	<p>Partially: there is an economic incentive to manage ghost gear so there will be measures in place to reduce gear loss in a lot of cases. Additionally, many generic fishery management measures contribute to gear loss avoidance (e.g. bycatch measures; IUU directives etc.). However, in some situations (e.g. some jurisdictions and/or fisheries) info on the scale of loss and impact would be lacking; and there would be a challenge to implement ghost gear avoidance (technically and cost wise).</p> <p>Initial consultation 2020 demonstrated that most respondents (27/34) who are involved in a fishery have cited that ALDFG is already managed in some way. This would suggest that any new measure would most likely be “feasible” for fishery partners.</p> <p>The recent 2021 consultation revealed that a significant proportion of respondents agree (18/35~43%) or respond neutrally (8/35~23%) with the</p>

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
			<p>sentiment that proposal will make it harder for fisheries that are already certified to remain MSC certified. A significant proportion of those agreeing or neutral with sentiment that changes will impact recertification recognise that change is needed. A significant majority (26/35~74%) agreed with the statement that fisheries can successfully implement changes within 5 years.</p> <p>With respect to feasibility of FAD measures - it's understood that this may depend on whether FAD loss/mitigation management exists via fishery controls (e.g CMMs) or has been implemented by the fishery.</p> <p>In this context the 2021 survey revealed that a significant majority of respondents (25/35~71%) agreed with the sentiment that fisheries can adapt to FAD elements of the proposal within 5 years.</p>
	<i>The option seems technically feasible for fishery partners</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>
	<i>The option seems affordable for fishery partners</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>
	<i>The option seems possible</i>	<i>5 = Completely agree</i>	<i>3 = Neither agree nor disagree</i>

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
	<i>given the management contexts of fishery partners</i>		
	<i>The option seems doable within 5 years for fishery partners</i>	<i>5 = Completely agree</i>	<i>5 = Completely agree</i>
Accessibility and Retention	<i>Does the change affect the accessibility and retention of fisheries in the MSC program?</i>	“No change” would unlikely have a net impact on accessibility and retention.	<p>Fisheries will need to demonstrate an understanding of the scale of ghost gear impact and be able to demonstrate ghost gear is being managed directly and specifically. Whilst for some situations these requirements would be challenging (e.g. certain jurisdictions which do not promote ghost gear avoidance; certain fisheries which do not currently manage ghost gear); on the whole the proposal arguably does not represent significant barriers to fisheries accessing or staying within the programme. The main reason for that is that in general fisheries do try and minimise ghost gear given the economic incentive and most general fishery management measures can contribute to avoiding ghost gear (e.g. reduction in IUU).</p> <p>The most recent survey 2021 revealed that a significant proportion of respondents disagree (15/35~43%) or respond neutrally (14/35~40%) with the sentiment that proposal will make it easier for new fisheries to become</p>

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
			certified. This sentiment was linked to new evidence costs and increased objection risk linked to reported ambiguity in requirements. Some responding neutrally or positively felt that increased costs may be mitigated by clearer expectations of new entrants.
	<i>The option seems accessible to fisheries seeking certification in the future</i>	<i>5 = Completely agree</i>	<i>3 = Neither agree nor disagree</i>
	<i>The option seems accessible to currently certified fisheries</i>	<i>5 = Completely agree</i>	<i>3 = Neither agree nor disagree</i>
Simplification	<i>Does the change simplify the Standard?</i>	No change by definition is not adding any complication to the standard; however, one could argue that the status quo is not very clear which may be causing some complication/confusion.	<p>This option would represent added complexity given it would be requiring more assessment than BAU. The pilot testing and recent consultation highlighted this complexity caused by duplication of 5 scoring issues and potential for ambiguity with some of the requirement wording.</p> <p>In response the Executive have reduced the scope of the proposal to 2 SI's and reduced the ambiguity of requirement wording through additional definitions (e.g. "minimise and negligible) and clearer Guidance.</p> <p>In response to pilot testing, the Executive has also made changes to</p>

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
			improve auditability and reduce complexity – chief among these changes were a removal of requirement directing CABs to consider P1 stock status impact from ghost gear. This change was perceived to add significant complexity (e.g. assessment of all stock impact from ghost gear) without significant benefit given that such impact would otherwise be highlighted within stock assessments. This change would better align with changes to P2 and improve auditability of this issue. This change would ultimately improve acceptability of the proposal with CABs.
	<i>The option seems to simplify the Standard</i>	<i>2 = Disagree</i>	<i>2 = Disagree</i>
Auditability	<i>Is the change auditable by CABs?</i>	The BAU is not clear as far its auditability is concerned given the vagueness of the requirements. This was demonstrated through previous analysis of fishery assessments (2019/2020).	<p>The change is auditable to CABs and arguably more auditable than the BAU.</p> <p>This option is more auditable than the BAU given the clear requirement focus (i.e. management strategy), added definitions (both normative and within Guidance), the extent of Guidance and expectations it clarifies for differing performance levels (e.g. Sg60 vs SG80)</p> <p>The auditability reviews in 2019 revealed that both assessors and ASI would find this option auditable (in assessors' perspective more auditable than BAU).</p> <p>The 2021 consultation and pilot testing did however highlight some concerns regarding interpretation of normative</p>

Impact Type	Description	Option 0	Option 1:
		BAU	Preferred policy option
			terms however this has been addressed by the additional clarifications explicit within the most recent proposal.
	<i>The option seems to auditable by CABs</i>	<i>1 = Completely disagree</i>	<i>4 = Agree</i>

5. Discussion and conclusion

The objectives of this project are to ensure ghost gear impact is explicitly addressed in fishery assessments and best practice approaches (e.g., ghost gear avoidance measures) are implemented in MSC fisheries. Option 1 is the most effective option at delivering these objectives. The option is therefore very acceptable to stakeholders as reflected by the consultation feedback. It's focus on improved FAD management was highlighted by almost all stakeholders during the consultation as a major improvement over the BAU. Concerns raised by fishery partners and CABs around ambiguity and complexity have been resolved through simplifying and clarifying the proposal which will strengthen its audibility (for CABs) and feasibility (for fishery partners). Whilst there remains some very minor concerns around accessibility this is offset by its effectiveness at driving best practice implementation in MSC fisheries.

In contrast, Option 0 (BAU) is unacceptable to most stakeholders given the ineffectiveness of current requirements at driving best practice management or consistent/correct assessment outcomes.

Appendix 1: Impact Assessment IA (0/1)

Options

The table below details “short-listed” options which were subject to impact assessment. Disregarded options are detailed later in the report.

Option 0 is a business-as-usual scenario.
The ‘business-as-usual’ scenario considered here would see no change to the Standard’s requirements or guidance. The obligation to understand and address impact of lost gear would remain driven through Guidance (see Guidance Box GSA 7, MSC Fisheries Standard 2.01).
Option 1 gives specific consideration of Ghost Gear impact and management resolving the issue through revising and clarifying requirements to include specific consideration of Ghost Gear impact and management. Best practice is clarified through new guidance.
<p><u>Detailed proposal:</u></p> <p>Revising the general requirements and associated guidance for unwanted catch, currently at SA3.1.6, SA3.5.3 (and for Principle 1, SA2.4.8.1), to include explicit reference to unwanted catch from ghost fishing. For ETP; consideration of “direct effects” (SA3.10.3) to be updated to make it explicit that consideration includes the impact of Ghost Gear. In relation to habitats, SA3.14.2 the measure/partial strategy/strategy definitions include specific mitigation for Ghost Gear (management).</p> <p><u>Proposed Requirement amendments and additions (in italics):</u></p> <p>P1 - Change SA2.4.8 to: SA2.4.8 Scoring issue (f) requires that UoAs review whether the use of alternative measures could reduce the mortality arising from unwanted catches from the target stocks, <i>including that from ghost fishing</i>.</p> <p>Primary/Secondary - Change SA3.1.6 to: In Pls 2.1.2 and 2.2.2, the term ‘unwanted catch’ shall be interpreted by the team as the part of the catch that a fisher did not intend to catch but could not avoid, and did not want or chose not to use. <i>This shall include primary or secondary species subject to ghost fishing mortality</i>.</p> <p>ETP - Addition to SA3.10.4: <i>When assessing scoring issue (b), the team shall take into account whether there are any changes in the catch or mortality of ETP species due to ghost fishing.</i></p> <p>Habitats - Change SA3.14.2. The team shall consider the differences between measures, partial strategy, and strategy as they apply to habitat management. <i>In this context Ghost Gear management responses are required be considered.</i></p> <p><u>Associated Guidance</u></p> <p>Update to GSA3.1.8 Unobserved Mortality. Replacement of ‘Box GSA7: MSC Intent: “Ghost fishing” and impacts from gear loss’ with a new box entitled ‘Ghost Gear, its impacts and their management’. This would include the following elements:</p> <ul style="list-style-type: none"> • Summary of how ‘Ghost Gear’ and its impacts are now operationalised in this option.

New definitions / glossary for Ghost Gear and its impacts (see below options).

Option 2 resolves the issue via a new management SI that would require fisheries to periodically review and implement measures to minimise Ghost Gear and its impact on P1 and P2. This SI is structurally similar to “review of alternative measures” clauses and would be replicated within P1, Primary, Secondary, ETP and Habitats components. Best practice is clarified through new guidance.

Detailed proposal:

New scoring issues similar to the ‘review of alternative measures’ scoring issues to require the consideration of how Ghost Gear impacts are managed in the fishery in relation to each component. This option considers impact and management in the same way as the ‘review of alternative measures’, requiring some assessment of impact to inform the review.

The new Scoring Issues under this option are (coded in relation to their location in the current standard):

PI 1.2.1 SI g: Review of ghost fishing of target species.

PI 2.1.2 SI f: Review of ghost fishing of primary species

PI 2.2.2 SI f: Review of ghost fishing of secondary species

PI 2.3.2 SI f: Review of ghost fishing of ETP species

PI 2.4.2 SI e: Review of Ghost Gear impact on “main” habitats

SG60	SG80	SG100
There has been a review of the potential effectiveness and practicality of measures to minimise Ghost Gear and its impact on [insert scoring component].	There is a regular review of the potential effectiveness and practicality of measures to minimise Ghost Gear and its impact on [insert scoring component] and they are implemented as appropriate.	There is biennial review of the potential effectiveness and practicality of measures to minimise Ghost Gear and its impact on [insert scoring component] and they are implemented as appropriate.

Associated guidance

Update to GSA3.1.8 Unobserved Mortality. Replacement of ‘Box GSA7: MSC Intent: “Ghost fishing” and impacts from gear loss’ with a new box entitled ‘Ghost gear, its impacts and their management’.

This would include the following elements:

Box GSA7: MSC Intent: Ghost gear, its impacts and their management

MSC Intent: Ghost gear - definitions, its impacts and their management

Assessment teams should consider the following definitions when considering ghost gear and its impacts:

Fishing gear: fishing gear is a tool with which living aquatic resources are captured. This refers to any physical device, or part thereof, or combination of items, that may be placed on or in the water or on

the seabed with the intended purpose of capturing or facilitating the capture, or harvesting of marine organisms, in accordance with MARPOL Annex V.

Ghost gear: fishing gear or parts thereof that is abandoned, lost, or discarded at sea. This is more formally referred to as 'Abandoned, Lost or Discarded Fishing Gear' (ALDFG).

Abandoned fishing gear: fishing gear over which that operator/owner has control and that could be retrieved by owner/operator, but that is deliberately left at sea due to force majeure or other unforeseen reasons.

Lost fishing gear: fishing gear over which the owner/operator has accidentally lost control and that cannot be located and/or retrieved by the owner/operator.

Discarded fishing gear: fishing gear that is deliberately released at sea without any attempt for further control or recovery by the owner/operator.

Ghost fishing: the continued capture /and or entanglement of target, non-target and ETP species by ghost gear.

Ghost fishing mortality: the mortality of free living or benthic organisms arising from the entrapment, entanglement or other physical interactions with ghost gear.

Ghost gear impact: environmental impacts resulting from ghost gear, including ghost fishing and/or its physical impact on the benthos.

The assessment of the impacts of both ghost fishing and gear loss are operationalised in the management components of both Principle 1 and Principle 2, where the extent to which the efficacy of measures and their implementation are reviewed are considered.

Various approaches can be taken to manage ghost gear and its impacts. As proposed by Macfadyen *et al* (2009⁶), interventions can be broadly divided between measures that **prevent** (avoiding the occurrence of ALDFG in the environment); **mitigate** (reducing the impact of ALDFG in the environment) and **Remediate** (removing ALDFG from the environment). These include but are not limited to:

Type of Measure	Example measures
Prevention	<ul style="list-style-type: none">• Better marking and identification of fishing gear• Spatial and / or temporal measures• Gear design to reduce whole or partial loss of the fishing gear<ul style="list-style-type: none">• Vessel design to reduce gear and other aquatic litter discarding• Improved end-of-life fishing gear disposal facilities• Fisher Education and awareness on preventing gear loss
Mitigation	<ul style="list-style-type: none">• Gear design to reduce the incidence and duration of ghost fishing

⁶ http://www.fao.org/fileadmin/user_upload/newsroom/docs/Ghost_fishing_report.pdf

Remediation	<ul style="list-style-type: none">Lost gear reporting, location and recovery initiatives	
<p>When considering approaches to managing ghost gear and its impacts, assessment teams should consider current best practise, referring to FAO (2009)⁷ for basic principles, the FAO (2009) Voluntary Guidelines on the Marking of Fishing Gear⁸ and the revised 2020 GGGI ‘Best Practice Framework for the Management of Fishing Gear’⁹. It is widely accepted that prevention is better than mitigation or remediation of ghost gear impacts and this should be taken into account during any reviews of the effectiveness and practicality of measures and their implementation.</p>		
<p>Option 3 requires fisheries to implement a management strategy to minimise Ghost Gear and its impact on P1 and P2 (preferred option). This option is like Option 2, but instead requires fisheries to implement a management strategy to minimise Ghost Gear and its impact on P1 and P2. This SI is structurally similar to the ‘measures/partial strategy/strategy’ clauses and would be replicated within P1, Primary, Secondary, ETP and Habitats components. There is also a difference in scope with this option: Ghost Gear definition includes Fish Aggregation Devices (FAD). Best practice is clarified through new guidance.</p>		
<p><u>Detailed proposal:</u></p> <p>New scoring issues that require the consideration of how Ghost Gear impacts are managed in the fishery in relation to each component. This option combines impact and management considerations as it requires some assessment of the impact to inform a strategy. The scope of Ghost Gear definition includes Fish Aggregating devices</p> <p>The specific changes under this option are (coded in relation to their location in the current standard):</p> <p>PI 1.2.1 SI g: Ghost fishing of target species. PI 2.1.2 SI f: Ghost fishing of primary species PI 2.2.2 SI f: Ghost fishing of secondary species PI 2.3.2 SI f: Ghost fishing of ETP species PI 2.4.2 SI e: Ghost Gear impact on “main” habitats</p>		
SG60	SG80	SG100
There are measures in place, if necessary, for the UoA that are expected to minimise Ghost Gear and its impact on [insert scoring component].	There is a partial strategy in place for the UoA, if necessary, that is expected to minimise Ghost Gear and its impact on [insert scoring component].	There is a strategy in place for the UoA that is expected to minimise Ghost Gear and its impact on [insert scoring component].

⁷ Macfadyen, G., T. Huntington and R. Cappell (2009). Abandoned, lost or otherwise discarded fishing gear. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p

⁸ FAO (2019). Voluntary Guidelines on the Marking of Fishing Gear. Directives volontaires sur le marquage des engins de pêche. Directrices voluntarias sobre el marcado de las artes de pesca. Rome/Roma. 88 pp. Licence/Licencia: CC BY-NC-SA 3.0 IGO

⁹ Under final preparation for GGGI – will be published by December 2020.

Associated guidance

The definition for the phrase “If necessary” in Table SA8 would be changed to:

The term “if necessary” is used in the management strategy PIs at SG60 and SG80 for the primary species, secondary species, habitats and ecosystems components. This is to exclude the assessment of UoAs that do not impact the relevant component at these SG levels. *In the case of ghost gear, this refers whether or not the risk of ghost fishing or ghost gear impacts are either demonstrably absent or negligible.*

Update to GSA3.1.8 Unobserved Mortality. Replacement of ‘Box GSA7: MSC Intent: “Ghost fishing” and impacts from gear loss’ with a new box entitled ‘*Ghost gear, its impacts and their management*’.

This would include the following elements. [Note the definition of FADs highlighted below represents an addition to scope of the option relative to Option 2].

Box GSA7: MSC Intent: Ghost gear, its impacts and their management

MSC Intent: Ghost gear - definitions, its impacts and their management

Assessment teams should consider the following definitions when considering ghost gear and its impacts:

Fishing gear: fishing gear is a tool with which living aquatic resources are captured. This refers to any physical device, or part thereof, or combination of items, that may be placed on or in the water or on the seabed with the intended purpose of capturing or facilitating the capture, or harvesting of marine organisms, in accordance with MARPOL Annex V.

Fish Aggregating Device (FAD): *refers to a permanent, semi-permanent or temporary object, structure or device of any material, man-made or natural, which is deployed, and/or tracked, and used to aggregate fish for subsequent capture. A FAD can be either an anchored FAD (aFAD) or a drifting FAD (dFAD). For the purpose of MSC assessment, FADs are not considered a gear type as such because they do not capture fish, but merely facilitate subsequent capture. FADs therefore maybe included as a functional part of certain gear types (e.g. purse seine, handline) as they are sometimes used to facilitate the capture efficiency of these gears.*

Ghost gear: fishing gear or parts thereof that is abandoned, lost, or discarded at sea. This is more formally referred to as ‘Abandoned, Lost or Discarded Fishing Gear’ (ALDFG).

Abandoned fishing gear: fishing gear over which that operator/owner has control and that could be retrieved by owner/operator, but that is deliberately left at sea due to force majeure or other unforeseen reasons.

Lost fishing gear: fishing gear over which the owner/operator has accidentally lost control and that cannot be located and/or retrieved by the owner/operator.

Discarded fishing gear: fishing gear that is deliberately released at sea without any attempt for further control or recovery by the owner/operator.

Ghost fishing: the continued capture /and or entanglement of target, non-target and ETP species by ghost gear.

Ghost fishing mortality: the mortality of free living or benthic organisms arising from the entrapment, entanglement or other physical interactions with ghost gear.

Ghost gear impact: environmental impacts resulting from ghost gear, including ghost fishing and/or its physical impact on the benthos.

The assessment of the impacts of ghost fishing and gear loss are operationalised in the management components of both Principle 1 and Principle 2, where the degree of management is considered e.g. whether *measures*, a *partial strategy* and a *strategy* are in place at SG60, SG80 and SG100 respectively (see Table SA8 for further discussion of these three phrases).

Various approaches can be taken to manage ghost gear and its impacts. As proposed by Macfadyen *et al* (2009¹⁰), interventions can be broadly divided between measures that **prevent** (avoiding the occurrence of ALDFG in the environment); **mitigate** (reducing the impact of ALDFG in the environment) and **Remediate** (removing ALDFG from the environment). These include but are not limited to:

Type of Measure	Example measures
Prevention	<ul style="list-style-type: none">• Better marking and identification of fishing gear• Spatial and / or temporal measures• Gear design to reduce whole or partial loss of the fishing gear<ul style="list-style-type: none">• Vessel design to reduce gear and other aquatic litter discarding• Improved end-of-life fishing gear disposal facilities• Fisher Education and awareness on preventing gear loss
Mitigation	<ul style="list-style-type: none">• Gear design to reduce the incidence and duration of ghost fishing
Remediation	<ul style="list-style-type: none">• Lost gear reporting, location and recovery initiatives

When considering approaches to managing ghost gear and its impacts, assessment teams should consider current best practise, referring to FAO (2009)¹¹ for basic principles, the FAO (2009) Voluntary Guidelines on the Marking of Fishing Gear¹², the revised 2020 GGGI 'Best Practice Framework for the Management of Fishing Gear'¹³ and ISSF best practice for FADs.

It is widely accepted that prevention is better than mitigation or remediation of ghost gear impacts. It is the intent of MSC to promote effective gear loss avoidance strategies and therefore it is expected that measures should include one or more preventative measures at SG60. It is expected that a *partial strategy* should include more than one measure that work together to prevent ghost fishing by the

¹⁰ http://www.fao.org/fileadmin/user_upload/newsroom/docs/Ghost_fishing_report.pdf

¹¹ Macfadyen, G., T. Huntington and R. Cappell (2009). Abandoned, lost or otherwise discarded fishing gear. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p

¹² FAO (2019). Voluntary Guidelines on the Marking of Fishing Gear. Directives volontaires sur le marquage des engins de pêche. Directrices voluntarias sobre el marcado de las artes de pesca. Rome/Roma. 88 pp. Licence/Licencia: CC BY-NC-SA 3.0 IGO

¹³ Under final preparation for GGGI – will be published by December 2020.

UoA whilst a *strategy* may also include mitigation and remedial measures to address ghost fishing by the UoA.

Summary of impacts

The following provides a summary of the findings of all of the impact assessment activities (both high level and more detailed), informed through consultation and analysis.

Option 0 is a business-as-usual (BAU) scenario. The main issue here is Ghost Gear impacts are addressed indirectly through vague guidance leading to incorrect and ineffective outcomes; outcomes not reflective of advances in best practice management.

Option 1 resolves the issue through revising and clarifying Principle 1 (P1) and Principle 2 (P2) requirements to include specific consideration of Ghost Gear impact and management. Best practice is clarified through new guidance. The option would be auditable and does not add complexity as it retains the assessment focus and structure of the BAU. Whilst the option supports policy objectives there are doubts that it will lead to “change on the water” because it largely assesses Ghost Gear indirectly (e.g. couched in unwanted catch considerations). Acceptability of this ‘middle ground’ option is uncertain as stakeholder views would likely be polarised (e.g. NGOs vs fishing industry) - it may please no one. Additionally, there are some feasibility and accessibility concerns for fisheries operating in jurisdictions that don’t manage Ghost Gear impacts.

Option 2 resolves the issue via a new management SI that would require fisheries to periodically review and implement measures to minimise Ghost Gear and its impact on P1 and P2. This SI is structurally similar to “review of alternative measures” clauses and would be replicated within P1, Primary, Secondary, ETP and Habitats components. Best practice is clarified through new guidance directing fisheries adopt measures to prevent the occurrence and impact of Ghost Gear, including promoting its removal from the environment. This option does support policy objectives and be largely acceptable to stakeholders but would add auditability issues as the clauses measure a few things simultaneously. The option would also add some complexity given duplication across P1 and P2 (5 new SI’s) and there are some minor feasibility and accessibility concerns for fisheries operating in jurisdictions that don’t manage Ghost Gear impacts.

Option 3, (preferred option) is like Option 2, but instead requires fisheries to implement a management strategy to minimise Ghost Gear and its impact on P1 and P2. There is also a difference in scope with this option: Ghost Gear definition includes lost, abandoned or discarded Fish Aggregation Devices (FAD). This SI is structurally similar to the ‘measures/partial strategy/strategy’ clauses and would be replicated within P1, Primary, Secondary, ETP and Habitats components. Best practice is clarified through new guidance, as with Option 2, but expectations of management interventions are set at each performance level. This will strengthen audibility and set clear expectations for fisheries. The increase in scope of the option allows for mitigation of some of the more severe Ghost Gear impacts (e.g. VME impact) in a way which helps clarify intent and drive best

practice for FAD management – this also means it’s likely to be acceptable to most stakeholders. On the negative side, the option suffers from adding complexity via duplication and there are some minor accessibility concerns for jurisdictions who don’t manage Ghost Gear, including FADs.

Impacts

Impact Assessment – High Level analysis

The impact assessment presented in the table below was based on expert judgement of the project and outreach leads, feedback provided by outreach co-readers, responses to a public consultation webinars and survey and the findings of consultants (Poseidon). Any impact type considered significant was subject to further analysis which is provided in further sections below.

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
Effectiveness	<i>Is the change effective at meeting the MSC’s intent?</i>	No. The implicit nature of GG criteria mean that assessments do not consider this issue effectively. The analysis has demonstrated this	Yes, somewhat. Ghost Gear impact consideration would be directed however best practice may not be very effectively incentivised. The changes still amount to the assessment of Ghost Gear indirectly (e.g. via unwanted catch impacts) which may not result in “change on the water”.	Yes. Both objectives would be more specifically supported (than 2) given they would be explicitly assessed and scored. Fisheries would need to consider, and review measures linked to Best Practice via Guidance which should make it clear what expectations of measure “effectiveness” should amount to. It would also drive fisheries to collect	Yes. Both objectives would be supported given they would be explicitly assessed and scored; it may be more effective than Option 2 as guidance could specify expected actions in measures & strategy, while review may be more passive. In general, an improved improvement pathway relative to Option 2. The FAD scope addition would represent an

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
				more information on Ghost Gear issue.	increase in “effectiveness” given the Ghost Gear impacts FADs are known to elicit on ecosystems
	<i>The option seems effective at resolving the issue(s) consistently and reliably.</i>	<i>1 = Completely disagree</i>	<i>3 = Neither agree nor disagree</i>	<i>4 = Agree</i>	<i>5 = Completely agree</i>
Acceptability	<i>Is the change acceptable to stakeholders?</i>	The majority of stakeholders would not find the BAU acceptable though a few would: a few stakeholders would not consider this impact as critical as others for example (e.g. as there is an economic incentive to keep ALDFG	Acceptability of this ‘middle ground’ uncertain as stakeholder views would likely be polarised (e.g. NGOs vs fishing industry). The survey demonstrated that most fishing industry representatives (5/6 who responded) would favour a non-normative change	Partially. Some would strongly support (e.g. NGOs) whilst others would not (in line with survey results described for previous option) given the likely cost implications (e.g. industry): any mitigation measure (e.g. gear marking; reporting; recovery) would add some upfront costs to the	As with Option 2. Some would strongly support (e.g. NGOs) whilst others would not given the likely mitigation costs (e.g. tuna industry). There would also likely be opposition from fisheries operating in jurisdictions where measures limiting FAD loss and impact do not

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
		impacts low there isn't necessarily the justification to address this need within the standard). The survey demonstrated (38/44 who responded to q) that most stakeholders supported a more explicit consideration of GG impacts . This shows that the BAU would likely be unacceptable.	(e.g. Guidance); whilst the majority of NGOs (6/7 who responded) would favour normative changes (e.g. Requirements)	operation and assessment.	currently exist (e.g. certain RFMOs)
	<i>The option seems acceptable to stakeholders</i>	<i>2 = Disagree</i>	<i>3 = Neither agree nor disagree</i>	<i>3 = Neither agree nor disagree</i>	<i>3 = Neither agree nor disagree</i>
Feasibility	<i>Is the change feasible to fishery partners?</i>	Yes. No change represents no additional action/measure required by	Partially: there is an economic incentive to manage ALDFG so there will be	Partially – as previous, however as ALDFG impact arguably less explicitly assessed,	Partially – mostly as per Option 2, however as ALDFG impact more explicitly assessed

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
		fishery partners. This would be highly feasible position for some fishery partners.	<p>measures in place to reduce gear loss in a lot of cases. Additionally, many generic fishery management measures contribute to gear loss avoidance (e.g. bycatch measures; IUU directives etc.). However, in some situations (e.g. some jurisdictions and/or fisheries) info on the scale of loss and impact would be lacking; and there would be a challenge to implement ALDFG avoidance (technically and cost wise).</p> <p>The survey demonstrated that most respondents (27/34) who are</p>	<p>this option may be marginally more feasible than Option 2. However, less feasible where jurisdictions do not currently manage ALDFG in some way.</p> <p>The survey demonstrated that most respondents (21/27) (who answered the question) felt that changes would need to be made in fisheries in response to any new requirement on gear loss, however a significant portion of respondents (11/24) felt that they were “prepared/very prepared” for gear loss measures. On the other hand a few (4/24) felt very unprepared for any such measures – these (3/4) tended</p>	<p>in terms of measures/strategy, so this option may be marginally less feasible than Options 2 where jurisdictions do not currently manage ALDFG in some way.</p> <p>With respect to feasibility of FAD measures - it’s understood that this may depend on whether FAD loss/mitigation management exists via fishery controls (e.g CMMs) or has been implemented by the fishery.</p> <p>In this context a large tuna fishery survey respondent supported gear loss measures linked to FAD management but another respondent suggested that the same fishery would</p>

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
			involved in a fishery (and who answered the question) have cited that ALDFG is already managed in some way. This would suggest that any new measure would most likely be “feasible” for fishery partners	to be representatives of small artisanal fisheries. The majority of management contexts are likely to direct measures which would work to reduce ALDFG in a general sense (e.g. IUU measures; bycatch mitigation measures; spatial measures to reduce gear conflict; input controls etc.) which will contribute to “Reviews”	be unprepared for any FAD measures.
	<i>The option seems technically feasible for fishery partners</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>
	<i>The option seems affordable for</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
	<i>fishery partners</i>				
	<i>The option seems possible given the management contexts of fishery partners</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>	<i>3 = Neither agree nor disagree</i>
	<i>The option seems doable within 5 years for fishery partners</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>	<i>4 = Agree</i>
Accessibility and Retention	<i>Does the change affect the accessibility and retention of fisheries in the MSC program?</i>	“No change” would unlikely have a net impact on accessibility and retention.	Fisheries will need to demonstrate an understanding of the scale of ALDFG impact and be able to demonstrate ALDFG is being actively managed	As per Option 1, however, with this option there will be more expectation that ALDFG is managed directly and specifically and the effectiveness is measured. This is	As per Option 2, however, with this option there will be an expectation that ALDFG is managed directly and specifically and the effectiveness is measured. This is

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
			as a part of approach which manages all sources of unwanted catch within the fishery. Whilst for some situations these requirements would be challenging (e.g. certain jurisdictions which do not promote ALDFG avoidance; certain fisheries which do not currently manage ALDFG); on the whole the intervention arguably does not represent significant barriers to fisheries accessing or staying within the programme. The main reason for that is that in general fisheries do try and	likely to add some ongoing costs to the assessment, in particular in situations where management jurisdictions do not actively manage ALDFG. However, it's unlikely that these factors will be prohibitive in terms of fisheries joining the programme. Whilst the survey demonstrated that a significant portion of respondents felt that fisheries would be prepared/or very prepared for gear loss measures, it did highlight that “small artisanal fisheries” would be challenged	likely to add some ongoing costs to the assessment, in particular in situations where management jurisdictions do not actively manage ALDFG (e.g. RFMOs who don't yet direct management of FADs). However, it's unlikely that these factors will be prohibitive in terms of fisheries joining the programme. Whilst the survey demonstrated that a significant portion of respondents felt that fisheries would be prepared/or very prepared for gear loss measures, it did highlight that “small artisanal fisheries” would be challenged

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
			minimise ALDFG given the economic incentive and most general fishery management measures can contribute to avoiding ALDFG (e.g. reduction in IUU).		
	<i>The option seems accessible to fisheries seeking certification in the future</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>	<i>3 = Neither agree nor disagree</i>	<i>3 = Neither agree nor disagree</i>
	<i>The option seems accessible to currently certified fisheries</i>	<i>5 = Completely agree</i>	<i>4 = Agree</i>	<i>3 = Neither agree nor disagree</i>	<i>3 = Neither agree nor disagree</i>
Simplification	<i>Does the change simplify the Standard?</i>	No change by definition is not adding any complication to the standard;	Whilst this option represents a minor change to existing requirements	As per Option 1 though more complexity added. This option would represent added	As per Option 2, though would arguably represent another layer of complexity given

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
		however, one could argue that the status quo is not very clear which may be causing some complication/c onfusion.	which will make it clearer how ALDFG should be scored, the proposal would be additive in the sense that it isn’t contributing to the Standard being less complex/complic ated	complexity given it would be requiring more assessment: 5 SI’s would be added. The complexity is manifest through duplication of assessment (5 components assessed).	the scope of the measures has increased to include FADs and arguably more consideration of management compared to Option 2.
	<i>The option seems to simplify the Standard</i>	<i>2 = Disagree</i>	<i>2 = Disagree</i>	<i>1 = Completely disagree</i>	<i>1 = Completely disagree</i>
Auditability	<i>Is the change auditable by CABs?</i>	The BAU is arguably not very clear as far its auditability is concerned given the vagueness of the requirements. This was demonstrated through previous analysis of	The amendment of requirements and guidance will lead to more specific assessment outputs re ALDFG which should be more auditable than BAU.	As per Option 1, though arguably more auditable given the issue being assessed through a specific SI. The one negative is that the SI suffers from trying to measure multiple variable simultaneously.	As per Option 2, though arguably more auditable given the tighter definitions of Management Strategy elements (linked to Best Practice Guidance) and the fact that there are less variables being measured as per Option 3.

Impact Type	Description	Option 0	Option 1	Option 2	Option 3
		BAU	Revision of Requirements – Unwanted Catch; Habitats; ETP	New Scoring Issue requiring review within all relevant P1 + P2 components. – “Alternative Measures – esque”	New Scoring Issue requiring measure/strategy within all relevant P1 + P2 components – “Management Strategy – esque”. This option includes FADs within scope of Ghost Gear definition
		fishery assessments.		The auditability reviews revealed that both assessors and ASI would find this option auditable (in assessors’ perspective more auditable than BAU)	The auditability reviews revealed that both assessors and ASI would find this option auditable (in assessors’ perspective more auditable than BAU)
	<i>The option seems to auditable by CABs</i>	<i>1 = Completely disagree</i>	<i>4 = Agree</i>	<i>5 = Completely agree</i>	<i>5 = Completely agree</i>

Impact Assessment – in depth analysis

The most significant impacts identified in the high-level impact analysis are explored in greater depth in relation to risks and benefits below. Impacts that are considered less significant are not explored in detail. For impact types “Effectiveness, Feasibility and Acceptability”, expert judgement was primarily informed by analysis of consultation feedback (text analysis and thematic analysis – link below). For impact type “Accessibility” internal scores database of pre-assessment scores from MSC Pathway projects was analysed, which includes 70 fisheries across 9 regions (UK, France, Spain, Australia, Indonesia, Mexico, South Africa and India). The MSC internal scoring database served as basis to investigate the proposals impact on “Retention”: the database includes all conditions received by MSC certified fisheries under v1.3 and v2.0 of the Fisheries Standard up to 31 December 2019. Altogether there are 885 unique conditions. Auditability reviews were also conducted to inform this in-depth impact analysis (see link below).

Link to:

- Consultation Analysis - Consultation Thematic Analysis
- Transcript Text Analysis – Ghost gear Survey Transcript text analysis
- Auditability Reviews - Ghost gear Auditability Reviews

Option 0: Business-as-usual

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
Effectiveness	No change to the current implicit consideration of Ghost Gear within the standard would not be effective in delivering either objective of the work: explicit consideration of impact and promoting Ghost Gear strategies.	Likely no significant impact
Acceptability	The majority of stakeholders would not find the BAU acceptable. The survey responses demonstrated that stakeholders supported a more explicit consideration of GG impacts The TAB conclusion is that BAU is not acceptable.	A minority of stakeholders (CAB/industry/academia) advocate no change due to a perceived risk to retention with changes in the standard – particularly bringing in new requirements.
Feasibility	Likely no significant impact	Highly feasible, clearly affordable and possible.
Accessibility	Likely no significant impact	Likely no significant impact
Retention	Likely no significant impact	Likely no significant impact
Simplification	Likely no significant impact	BAU is the simplest option but does not simplify the standard.
Auditability	Review of assessments has shown that Ghost Gear is not audited	

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
	effectively or consistently to date under the current standard (e.g. Ghost Gear consideration absent in 25% of assessments reviewed).	Likely no significant impact

Option 1 Revised general requirements for unwanted catch, ETP, Primary/Secondary and Habitats

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
Effectiveness	Likely no significant impact	Both objectives (ALDFG impact and management) would be supported although the change is not as prominent as a new PI or SI. There is therefore a risk that the consideration of Ghost Gear impacts in assessments will continue to be inconsistent and, being less evident in the standard, there is not a clear promotion of effective measures.
Acceptability	<p>Acceptability of this ‘middle ground’ uncertain as stakeholder views would likely be polarised (e.g. NGOs vs fishing industry)</p> <p>Online survey demonstrated that most fishing industry representatives (5/6 who responded) would favour a non-normative change (e.g. Guidance); whilst the majority of NGOs (6/7 who responded) would favour normative changes (e.g. Requirements)</p> <p>Online survey showed this to be one of the least favoured options.</p> <p>It may please nobody.</p>	Some stakeholders would be supportive of a normative change (e.g. NGOs) as demonstrated by online survey.
Feasibility	Although some challenges (the survey responses suggested that “small artisanal” fisheries would be “unprepared/very unprepared” in relation to Ghost Gear measures), it	Likely no significant impact

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
	<p>is expected to be feasible for fisheries to show required evidence.</p> <p>P2 reviewer indicates marginal additional time/cost due to changes proposed in the option.</p>	
Accessibility	Some challenges with new requirements, but not to the extent that accessibility significantly impacted.	Likely no significant impact
Retention	Some challenges with new requirements, but not to the extent that retention significantly impacted	Likely no significant impact
Simplification	Revision of requirements should clarify the standard. It is additive, but less than the additional complexity of Options introducing new PIs or SIs.	Likely no significant impact
Auditability	Likely no significant impact	<p>The amendment of requirements and guidance will lead to more specific assessment outputs re ALDFG, which will be more auditable than BAU.</p> <p>The auditability review confirmed this would be an improvement on BAU.</p>

Option 2 New scoring issues under P1 & P2 management PIs on a 'Review of Ghost Gear'

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
Effectiveness	Likely no significant impact	<p>Both objectives are specifically supported given they would be explicitly assessed and scored;</p> <p>The consultation feedback suggests that Ghost Gear is less likely to have been subject to review than bycatch management. The number of conditions resulting from a Ghost Gear scoring issue may be expected to be higher.</p>

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
		This is a positive impact in terms of 'change on the water'.
Acceptability	Some stakeholders would oppose new requirements. For example, the majority of fishing industry representatives opposed any normative change.	Some stakeholders would strongly support (e.g. NGOs; retailers) given the more explicit mitigation. "New gear loss avoidance measures" was supported by majority of NGOs responded to the online survey. This option ranked 4th in the online survey after new PIs in P2 or P3 and within 2.5 (ecosystems).
Feasibility	Although some challenges it is expected to be feasible for fisheries to show required evidence. P2 reviewer indicates marginal additional time/cost due to changes proposed in the option.	Likely no significant impact
Accessibility	With this option there is an expectation that ALDFG is managed directly and specifically and the effectiveness is measured. This is likely to add some ongoing costs to the assessment, in particular in situations where management jurisdictions do not actively manage ALDFG currently such as many artisanal fisheries. However, it's unlikely that these factors will be prohibitive in terms of fisheries joining the programme. The PA analysis shows that 1.2.1 and 2.2.2 are already problematic PIs for fisheries with 52% and 30% failing on these PIs. Within these PIs the Review of Alternative Measures SG is cited in around 12 of the fisheries listed. This is as a result of the issue being considered at SG60, resulting in a fail if not currently considered.	Likely no significant impact
Retention	Retention has been assessed by using the review of alternative measures as a proxy as this option proposes a similar structure.	

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
	<p>22% of open conditions are for management PIs. More than half of these are whitefish (33%) and tuna (21%) fisheries. While the database does not enable filtering by SG, a review of open conditions shows that very few relate to the 'Review of Alternative Measures' SGs.</p> <p>There are 63 fisheries with conditions on management PIs, but a review of the rationale suggests 11 of these (17%) refer in full or in part to the 'Review of Alternative Measures' SG.</p> <p>While retention will ultimately depend on where the bar is set for each SG, there is no evidence to indicate that including a Ghost Gear scoring issue will result in fisheries failing or leaving the programme. However, this could be avoided by making it an issue scored at SG80 and SG100.</p>	Likely no significant impact
Simplification	<p>Additional requirements do not simplify the standard, even though the option represents greater clarity than the current standard.</p> <p>This option would add complexity with 5 SI's.</p>	Likely no significant impact
Auditability	<p>The reliance on 'review' wording means this option would suffer from the same ambiguity in assessment as the 'Review of Alternative Measures' – clarity is lacking on what would be adequate in terms of review, who undertakes it and how it is considered.</p> <p>The review of auditability indicated this option is less preferable to option 3 in terms of auditability and clarity and sends a clear message to stakeholders that this is a new, standalone requirement.</p>	Likely no significant impact

Option 3 New scoring issues under P1 & P2 management PIs on 'Measures or strategies for Ghost Gear'

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
Effectiveness		Considered the most effective Option as measures/strategies can

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
	Likely no significant impact	<p>directly consider (and so promote) gear loss mitigation strategies. It is also expected that any strategy should make some assessment of Ghost Gear impact and this expectation can be made explicit in the associated guidance.</p> <p>This option is expected to be more effective than Option 2 in terms of change on the water as effective measures and strategy can be better defined in requirements than a review (stronger improvement pathway)</p> <p>The inclusion of FADs makes the option more effective as the impact of FADs, particularly on VME habitats like coral reefs will be considered.</p>
Acceptability	Likely no significant impact	<p>As option 2.</p> <p>The inclusion of FADs would make this more acceptable than Option 2 to those stakeholders favouring greater consideration of Ghost Gear impacts.</p>
Feasibility	<p>Although some challenges (The survey responses suggested that “small artisanal” fisheries would be “unprepared/very unprepared” in relation to Ghost Gear measures), it is expected to be feasible for fisheries to show required evidence.</p> <p>P2 reviewer indicates marginal additional time/cost due to changes proposed in the option.</p>	Likely no significant impact
Accessibility	With this option there is an expectation that ALDFG is managed directly and specifically and the effectiveness is measured. This is likely to add some ongoing costs to the assessment, in particular in situations where management jurisdictions do not actively manage ALDFG currently such as many artisanal fisheries. Again there is likely to be more of a challenge to artisanal fisheries that do not have sophisticated FAD tracking	Likely no significant impact

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)
	<p>as many of the large scale tuna fisheries are introducing.</p> <p>However, it's unlikely that these factors will be prohibitive in terms of fisheries joining the programme.</p> <p>The PA analysis shows that 1.2.1 and 2.2.2 are already problematic PIs for fisheries with 52% and 30% failing on these PIs. Within these PIs the Review of Alternative Measures SG is cited in around 12 of the fisheries listed. This is as a result of the issue being considered at SG60, resulting in a fail if not currently considered.</p>	
Retention	<p>Some challenges with new requirements, but not to the extent that retention significantly impacted (as with Option 2).</p> <p>The inclusion of FADs (used by some certified tuna fisheries), is not expected to change this outcome.</p>	Likely no significant impact
Simplification	<p>Some additional complexity – e.g. interaction between these various Sis: is a single strategy expected that considers each component?</p> <p>This option would add complexity with 5 SI's.</p>	Likely no significant impact
Auditability	<p>The inclusion of FADs is not expected to result in different auditability issues – FAD fisheries are likely to focus more on FAD management than gear loss, which is less of an issue for purse seine fisheries.</p>	<p>This option has the benefit of considering a Ghost Gear 'strategy' rather than a reliance on 'review' wording as described for Option 3 above.</p> <p>Guidance can reference FAO guidelines and other best practice guidelines to indicate what measures are effective and what a strategy may be expected to contain.</p> <p>The auditability review states 'from a purely auditability perspective I would think that these options [2,3] are the clearest, leaving least room for assessor omissions.'</p>

Impact type	Risk (expected negative impacts)	Benefit (Expected positive impacts)

Additional options and impacts

Options disregarded								
<p>Option A: A new/amended requirement in Principle 3 (i.e. 3.2.1) with the objective that fisheries have short- and long-term objectives to achieve P1 & P2 outcomes (as expressed in option a) which include measures to reduce gear loss and manage the impacts of ALDFG.</p> <p>There were some stakeholders that said, ‘put the management bit into P3’, but those who know the standard felt this would not be appropriate and specific issues like Ghost Gear don’t fit in relation to the rest of P3. The most appropriate place seemed to be 3.2.1, but the approach to this is specified in the requirements: SA4.7.1.1 The objectives shall be assessed under this PI and the strategies that implement the objectives shall be assessed under P1 and P2. So this still expects the strategies to be assessed under P1 and P2.</p> <p>Based on this and considering the fact that impact is not addressed explicitly in P3 (so that objective would need to be addressed elsewhere anyway), we didn’t include a P3 option.</p>								
<p>Option B: A revision to the guidance only. Specifically, this would be a revision to the current text on ‘unobserved mortality’ (GSA 3.1.8) and updating Box GSA7 to describe in more detail the expected consideration of ghost fishing by assessment teams. This could be accompanied by examples of good practice to avoid gear loss and mitigation actions such as the FAO’s gear marking guidelines and the GGGL’s Best Practice Framework.</p> <p>The main reason this option was disregarded was that it scored very low against impact types “Effectiveness” and “Acceptability”. In both cases a “Guidance only” option would in-effect be very similar to the BAU which will ultimately not deliver on the policy objectives given that behaviour change would not be mandated as is the case now; any action would remain largely in-auditable and fisheries taking action to reduce gear loss/mitigate Ghost Gear impact would not be effectively rewarded.</p>								
<p>Option C: A new scoring component consisting of a suite of performance indicators within principle 2. This is based on the current P2 structure of Pis relating to outcome (to consider ghost fishing impact); management (to consider the management measures or strategies in place; and information (to consider the type and level of information collected).</p> <table border="1"> <tr> <th>Performance indicator</th><th></th><th>Scoring issues</th></tr> <tr> <td>2.X.1</td><td>Outcome</td><td> <p>The UoA meets national and international requirements for avoidance of ghost fishing.</p> <p>The UoA does not cause significant impacts from ghost fishing.</p> </td></tr> </table>			Performance indicator		Scoring issues	2.X.1	Outcome	<p>The UoA meets national and international requirements for avoidance of ghost fishing.</p> <p>The UoA does not cause significant impacts from ghost fishing.</p>
Performance indicator		Scoring issues						
2.X.1	Outcome	<p>The UoA meets national and international requirements for avoidance of ghost fishing.</p> <p>The UoA does not cause significant impacts from ghost fishing.</p>						

2.X.2	Management	There is a strategy in place that is designed to ensure the UoA minimises ALDFG and does not cause significant impacts from ghost fishing.
2.X.3	Information	<p>Relevant information on gear loss and its impact is collected to support the management of UoA impacts from ghost fishing including:</p> <ul style="list-style-type: none"> - information for the development of the management strategy; - information to assess the effectiveness of the management strategy; and - information to determine the risk of impact from ghost fishing

Considered unrealistic to include as a suite of PIs. No national or international standards known (only best practice guidelines e.g. FAO & GGGI). Defining ‘significant’ impact very difficult. Also inconsistency with other PIs in P2 that relate to ecosystem components and risk of overlap when impacts on these are assessed (not a good structural fit). It may also mean that proportionally the weighting of P2 requirements would reduce/be diluted.

Additionally the option scored very low for “Effectiveness” and “Simplification”. Whilst information and management criteria would support policy objectives, impact criteria may not be very auditable or feasible given the uncertainty over what they are measuring.

Whilst it may represent the most comprehensive review of Ghost Gear issue, other options represent more feasible and effective alternatives at this point in the development process.

Option D. The option explicitly referring to FADs is removed as the proposed definitions make explicit reference to FADs to ensure these are included as part of Ghost Gear assessment.

SG60	SG80	SG100
There has been a review of the potential effectiveness and practicality of measures to minimise the loss of UoA gear and FADs associated with Ghost Gear impacts on [insert scoring component].	There is a regular review of the potential effectiveness and practicality of measures to minimise the loss of UoA gear and FADs associated with Ghost Gear impacts on [insert scoring component] and they are implemented as appropriate.	There is biennial review of the potential effectiveness and practicality of alternative measures to minimise the loss of UoA gear and FADs associated with Ghost Gear impacts on [insert scoring component] and they are implemented as appropriate.

Option E. A previous option mirrored current option 3, with the difference that FADs were not included. This was removed and merged to make the current option 3. The merging was due to reducing the total number of options for later review.

Option F. Consideration of ‘ghost gear’ would be included one or more of the three Ecosystem PIs e.g. outcome, management strategy and information. This option was disregarded because:

- Many of the impacts of ‘ghost gear’ are specific to the other P2 PIs e.g. 1^o & 2^o species, ETPs and habitats and would probably be better addressed directly under these
- Assessing this specific issue appears contrary to current requirements, specifically: SA3.16.1 The team shall score the other components of the assessment (i.e., P1 target species, primary species, secondary species, ETP species and habitats) separately to this PI, **which considers the wider ecosystem structure and function.**
- This option might be considered unbalanced e.g. it is highlighting ‘ghost gear’ as a critical issue without considering any other issues that might not be included in the other P2 PIs.
- ghost gear impact on target species would not be explicitly considered under 2.5. therefore a P1 SI might still be needed

Discussion and conclusion

Option 0 (BAU) is unacceptable to all stakeholders given the ineffectiveness of current requirements at driving best practice management or consistent/correct assessment outcomes.

Option 1 represents the least complex option but would be ineffective at driving improvements given its largely indirect consideration. It would thus be unacceptable to stakeholders and would suffer from auditability concerns.

Option 2 would be acceptable to stakeholders and resolve the issues but may not be as effective as Option 3 as it’s unlikely to incentivise best practice to the same extent (see below). Whilst more auditable than Option 1 it suffers from greater complexity than Option 2.

Option 3 (preferred option) would resolve the main issue through requiring a dedicated strategy informed through information about impact and best practice – its improvement pathway is stronger than Option 2 as it’s linked to the quality, scope and coherence of the management measure rather than the frequency of management review (as with Option 2). Further, whilst emphasising fisheries implement best practice (e.g. Ghost Gear preventative measures), the option avoids prescription so is scalable and more feasible for fishery partners. The option does retain some weaknesses of Option 2 (e.g. complexity via multiple SIs) and there are some minor accessibility concerns, however it’s likely to be the most acceptable: Ghost Gear impact from lost/abandoned FADs was extensively highlighted throughout the consultation. It’s also the most effective option, particularly in the context of Vulnerable Marine Ecosystem impact mitigation.