 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Fifth Meeting of the Seabird Bycatch Working Group <i>La Rochelle, France, 1-3 May 2013</i></p> <p>A review of conditions relating to seabird bycatch in Marine Stewardship Council fisheries assessments</p> <p><i>Stephanie Good (MSC)</i></p>
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SUMMARY

The Marine Stewardship Council (MSC) is an independent not for profit global organisation, founded in 1997, which sets an international standard for sustainable fishing. The MSC aims to use its ecolabel and fishery certification program to contribute to the health of the world's oceans by recognising and rewarding sustainable fishing practices, influencing the choices people make when buying seafood and working with partners to transform the seafood market to a sustainable basis.

The objective of this study is to investigate how the issue of seabird bycatch has been addressed in the MSC programme through looking at conditions on this topic triggered during fishery assessments.

Of the 225 fisheries (Units of Certification) that have undertaken a complete initial assessment, 35% were certified with conditions relating to seabird bycatch. Most of the Performance Indicator scores triggering a condition on seabird bycatch were related to the availability of quantitative information on bycatch numbers or impacts. This corresponds to findings from a previous study by the American Bird Conservancy (Wiedenfield, 2012).

Conditions that have been closed out over the period of certification have shown improvements in the collection of fishery-specific seabird data, either through research projects, collection of data in logbooks or registers or improved observer coverage. In most cases, seabird bycatch was found to be negligible.

The MSC is committed to being in line with best practice in sustainability, but the current requirements may not be robust enough in encouraging fisheries to mitigate bycatch in line with best practices. This topic is being considered as part of a wider Fisheries Standard Review in 2013.

RECOMMENDATIONS

1. The MSC recommends that seabird bycatch experts participate in the 2013 Fisheries Standard Review process via consultations and workshops,

particularly in relation to the project on best practice in bycatch management.

2. Assessments of fishery sustainability would benefit from the ready availability of information on the distribution and likely interaction of seabirds with fishing activities, global assessments of seabird population status and impact on species or populations, and best practice manuals of effective mitigation measures for gillnet and other fisheries.

Revisión de condiciones vinculadas con la captura accidental de aves marinas en evaluaciones de pesquerías realizadas por el Marine Stewardship Council.

El Marine Stewardship Council (MSC) es una organización mundial sin fines de lucro, fundada en 1997, que establece una norma internacional para la pesca sostenible. El MSC se propone utilizar su programa de ecoetiquetas y certificación de pesquerías para contribuir con la salud de los océanos del mundo, brindando reconocimiento y recompensas a las prácticas de pesca sostenibles, ejerciendo una influencia sobre las elecciones de las personas que compran productos del mar, y trabajando con sus socios para transformar el mercado de productos del mar a fin de volverlo sustentable.

El objetivo de este estudio es investigar cómo se ha abordado el tema de la captura accidental de aves marinas en el programa del MSC observando las condiciones vinculadas con este tema que surgieron en las evaluaciones de pesquerías.

De las 225 pesquerías (Unidades de Certificación) que han llevado a cabo una evaluación inicial completa, el 35% recibió una certificación con condiciones respecto de la captura accidental de aves marinas. La mayoría de las puntuaciones del Indicador del Rendimiento que dieron lugar a una condición respecto de la captura accidental de aves marinas estuvieron relacionadas con la disponibilidad de información cuantitativa sobre las cifras o los impactos de la captura accidental. Esto corresponde a conclusiones de un estudio anterior llevado a cabo por American Bird Conservancy (Wiedenfield, 2012).

Las condiciones que se cerraron durante el período de certificación mostraron mejoras en la recabación de datos sobre aves marinas de pesquerías específicas, ya sea a través de proyectos de investigación, recabación de datos en libros o registros, o mejor cobertura de los observadores. En la mayoría de los casos, se determinó que los niveles de captura accidental de aves marinas eran despreciables.

El MSC ha asumido el compromiso de alinearse con las mejores prácticas de sostenibilidad, pero es posible que los requisitos actuales no tengan la fuerza suficiente para alentar a las pesquerías a mitigar la captura accidental de conformidad con las mejores prácticas. Este tema está siendo analizado como parte de una Revisión de las Normas para Pesquerías (Fisheries Standard Review) más amplia, que se realizará en 2013.

RECOMENDACIONES

3. El MSC recomienda que los expertos en captura accidental de aves marinas participen en el proceso de Revisión de las Normas para Pesquerías en 2013, a través de consultas y talleres, particularmente en relación con el proyecto sobre mejores prácticas en gestión de la captura accidental.
4. Las evaluaciones de sostenibilidad de las pesquerías se beneficiarían si contaran con información de fácil acceso sobre la distribución y posible interacción de las aves marinas con las actividades pesqueras, evaluaciones globales acerca del estado de las poblaciones de aves marinas y del impacto sobre las especies o las poblaciones, y manuales de mejores prácticas de medidas de mitigación efectivas para pesquerías que utilizan redes de enmalle y otras.

Passage en revue des conditions à remplir en matière de capture accidentelle d'oiseaux marins lors des évaluations de pêcheries par le Conseil pour la bonne gestion des mers (MSC)

Le Conseil pour la bonne gestion des mers (MSC) est une organisation internationale et indépendante à but non lucratif, créée en 1997, qui établit des normes internationales en matière de pêche durable. Le MSC utilise son programme d'écolabellisation et de certification de produits de la mer pour contribuer à la bonne santé des océans en identifiant et en récompensant les pratiques de pêche durables, en influençant les choix des consommateurs lorsqu'ils achètent des produits de la mer et en collaborant avec des partenaires pour rendre le marché de la pêche plus durable.

Cette étude a pour objectif de comprendre la manière dont la question des captures accidentelles d'oiseaux marins a été abordée dans le programme du MSC, à travers l'analyse des conditions à remplir lors de l'évaluation des pêcheries.

Sur les 225 pêcheries (unités de certification) qui ont fait l'objet d'une première évaluation complète, 35% remplissaient les conditions fixées par le MSC en matière de capture accidentelle. La plupart des notes des indicateurs de performance soumises à une condition par rapport à la capture accidentelle d'oiseaux marins étaient liées à la quantité d'informations disponibles en matière de nombre et d'impact des captures accidentelles. Cela correspond aux conclusions d'une précédente étude menée par American Bird Conservancy (Wiedenfield, 2012).

Les conditions qui ont été liquidées lors de la période de certification ont révélé une amélioration au niveau de la collecte d'informations en matière d'oiseaux marins dans les pêcheries, par le biais de projets de recherche, de collecte de données dans des carnets ou des registres ou une meilleure couverture des observations. Dans la plupart des cas, les épisodes de capture accidentelle d'oiseaux marins étaient négligeables.

Le MSC s'engage à respecter les bonnes pratiques en matière de durabilité, mais les conditions actuelles ne sont peut-être pas suffisamment contraignantes pour encourager

les pêcheries à limiter les captures accidentelles, conformément à ces bonnes pratiques. Ce sujet fait partie de l'Examen des normes des pêcheries de 2013.

RECOMMANDATIONS

1. Le MSC recommande que des experts en matière de capture accidentelle d'oiseaux marins participent, en 2013, au processus d'examen des normes des pêcheries par le biais de consultations et d'ateliers, concernant notamment le projet de bonnes pratiques dans la gestion des captures accidentelles.
2. Les évaluations de la durabilité des pêcheries pourraient tirer parti de la disponibilité immédiate d'informations en matière de répartition et d'interactions potentielles entre les oiseaux marins et les activités de pêche, des évaluations internationales du statut démographique des oiseaux marins et de l'impact sur les espèces ou les populations, ainsi que des manuels de bonnes pratiques reprenant des mesures d'atténuation efficaces pour les filets maillants et autres pêcheries.

1. INTRODUCTION

1.1 Background

The Marine Stewardship Council (MSC) is an independent not for profit global organisation, founded in 1997, which sets an international standard for sustainable fishing. The MSC uses its ecolabel and fishery certification program to contribute to the health of the world's oceans by recognising and rewarding sustainable fishing practices, influencing the choices people make when buying seafood and working with partners to transform the seafood market to a sustainable basis. The MSC's vision is of the world's ocean's teeming with life and seafood supplies safeguarded for this and future generations.

The MSC's Standard for sustainable fishing is comprised of three core Principles that require: healthy stocks (Principle 1); low impacts in the ecosystem (Principle 2); and effective management systems (Principle 3).

The assessment process involves independent, third party assessments by Conformity Assessment Bodies (CABs) against the MSC Fishery Standard. CABs assess the fishery's performance or management using 31 specific questions or "performance indicators" (PIs). The 31 PIs are grouped under each of the MSC's three main principles listed above, and together are referred to as the 'default assessment tree', found in Annex CB of the MSC Certification Requirements (CR)¹.

A minimum score of 60 is required on each PI to qualify for MSC certification. To pass an MSC assessment a fishery must achieve an average score of 80 for each one of the three Principles, determined by the average of the PI scores under that Principle. Further, any PI that scores less than 80 must be improved to the 80 level over the course of the fisheries certification by triggering a 'condition' of certification. The MSC program consciously allows fisheries to qualify for MSC certification without meeting the 80 level on all indicators. MSC believes the movement of fisheries from the 60 to 80 levels is a positive outcome for the world's fisheries and directly in line with the MSC's vision. This is one of the tenets of MSC's 'Theory of Change' (MSC, 2010).

Fishery impacts on seabirds are typically assessed in the Principle 2 components on Bycatch Species and/or Endangered, Threatened and Protected (ETP) Species. Each of these components contains three PIs – Outcome, Management and Information. Where there is insufficient data to assess the Outcome PIs using the default assessment tree, certifiers can use the MSC's Risk Based Framework (RBF). The RBF is two tiered; first is a qualitative, stakeholder-driven process where expert opinion is gathered; this is followed, if necessary, by a semi-quantitative assessment based on the productivity of the species concerned and their susceptibility to fishing gear.

A fisheries certificate is valid for five years provided that annual audits establish that the fishery continues to meet the MSC standard and is making adequate progress on required PI conditions.

¹ <http://www.msc.org/documents/scheme-documents/msc-scheme-requirements/msc-certification-requirements-v1.3/view>

1.2. Objectives

The objective of this study is to investigate how the issue of seabird bycatch has been addressed in the MSC programme through looking at conditions on this topic triggered during fishery assessments.

1.3 Previous studies

The American Bird Conservancy (ABC) published an analysis of the effects of the MSC's fisheries certification programme on seabird conservation that concluded that the MSC Certification criteria 'reasonably address seabird bycatch and food chain issues' (Wiedenfeld, 2012). This study found that from a pool of 138 fisheries with public reports (in assessment and certified), conditions for certification or recommendations that could affect seabird issues were placed on 54% of them. Of these conditions, 79% pertained to obtaining improved information on bycatch and ETP species interactions and only 4% corresponded to direct actions that would affect seabird bycatch.

A study undertaken by Cambridge et al (2011) showed that out of 447 fisheries that have gone through pre-assessments, 48% were recommended as suitable to proceed to full assessment once some specific issues are fixed. Overall, the Cambridge et al study found that 35% of pre-assessed fisheries moved on to full assessment. The implication is that many fisheries make the largest improvements prior to entering full assessment. There are some examples, however, of 'on the water' improvements relating to seabird bycatch including reducing bird bycatch in the South African hake and South Georgia toothfish fisheries (Cambridge et al., 2011).

1.4 Methods

A list of fisheries was generated that had completed an assessment and had conditions triggered on Performance Indicators (PIs) relating to seabird bycatch in the Bycatch or ETP components (i.e. had a score <80). PIs were judged to have been related to seabird bycatch if seabirds (as a species group or individual species) were explicitly named as an issue in the PI scoring text or condition. Assessments on fisheries conducted prior to 2008, when the introduction of the standardized PIs occurred (referred to as 'Pre-FAM' fisheries) were also included in this review.

The data from scoring tables were supplemented by more detailed information on seabird species or species groups encountered and conditions and surveillance outcomes collected from MSC fisheries certification reports². The tabulated results are presented below.

2. RESULTS

There are currently (as of 10/3/2013) 195 fisheries that have been certified to the MSC Standard, 13 that failed assessment, 9 that withdrew after certification and 8 that were suspended. A 'fishery' in this instance refers to an MSC Unit of Certification, i.e. the target stock(s) combined with the fishing method/gear and practice pursuing that stock. Thus, the Norway North East Arctic cod assessment process comprises five fisheries, one each for the Danish seine, demersal trawl, gillnet, hook and line and longline gears used.

² publically available online: <http://www.msc.org/track-a-fishery/fisheries-in-the-program>

Of the 225 fisheries (Units of Certification) that have undertaken a complete initial assessment, 79 (35%) scored less than 80 on one of the ETP or Bycatch PIs relating to seabird bycatch, for a total of 111 conditions triggered. Three of these fisheries were not certified, two have been suspended and two have withdrawn from the programme, but all have been counted in this review.

Most of the PI scores triggering a condition were related to the availability of information, either on fishery-specific bycatch numbers or impacts of the fishery on seabird populations (Table 1). The MSC standard results in a low score for fisheries if they have unacceptable impacts on seabirds, in an application of the precautionary approach if they do not have sufficient information to be certain that impacts are sustainable. Fewer than 4% of conditions triggered were in relation to the fishery having no mitigation measures or a strategy for managing bycatch in place (Table 1).

Table 1 Number of conditions triggered by reason, with description

Reason	Number of conditions triggered	Description
Lack of information - impacts (direct)	63	Condition triggered when there was no information or limited information on the fishery-specific impacts on seabird populations (CR 2.2.1, 2.3.1, 2.3.3 and some Pre-FAM)
Lack of information - bycatch numbers	25	Condition triggered when there was no information or limited on fishery-specific seabird bycatch numbers (CR: 2.2.3, 2.3.1, 2.3.3 and some Pre-FAM) Pre-FAM: no impartial data on bycatch, e.g. observer programme; no data to species level
Evidence strategy effective	10	Condition triggered when there was no evidence that a partial strategy (bycatch) or strategy (ETP) was being implemented successfully (CR PI 2.2.2, 2.3.2)
Evidence mitigation measures effective	3	Pre-FAM: Condition triggered when there was no evidence that mitigation measures were being implemented successfully
No mitigation measures	3	Pre-FAM: Condition triggered when there were no mitigation measures being implemented in the fishery
Lack of information - support strategy	3	Information not sufficient to measure trends and support a strategy or partial strategy to manage impacts (CR PI 2.2.3, 2.3.3) Pre-FAM: Condition triggered when no plan for review or updating information on bycatch levels specified
Lack of information - indirect effects	2	Condition triggered when indirect effects of the fishery on ETP species have not been considered (CR PI 2.3.1)
No strategy in place	2	Condition triggered when no strategy in place for managing the fishery's impact on ETP species (CR PI 2.3.2)

The conditions triggered were spread across geographic regions, but were most prevalent in the Northeast Atlantic, Northeast Arctic and North Pacific, and related to a number of different bird species groups (Table 2). Where species listed on the ACAP Agreement were named in an assessment report, they are also provided by region in Table 2. There was also a spread of different gear types where conditions relating to seabirds were triggered, but most were for longlines, gillnets and trawlers (Figure 1). These three gear types were assessed as medium to high risk gear types for seabirds by ABC (2011).

Table 2 Number of conditions triggered (111) by region and related bird species groups referenced in (79) fishery certification reports

Region	Bird species groups referenced (specific ACAP species referenced)	Number of conditions triggered
Arctic (NE)	Fulmars, diving birds	25
Atlantic (NE – including North Sea and Baltic Sea)	Shearwaters, fulmars, gulls, gannets, auks, cormorants, divers (loons), sea ducks, diving ducks, grebes (<i>Balearic shearwater</i>)	33
Atlantic (S-SW)	Albatrosses, petrels, shearwaters, gannets, prions, noddys, tropicbirds (<i>Atlantic yellow-nosed albatross, Indian yellow-nosed albatross, Black-browed albatross, Shy albatross, Giant petrel, White-chinned petrel</i>)	17
Pacific (Central)	Petrels, murrelets, boobies, terns, pelicans, tropicbirds, gulls (<i>Black petrel</i>)	3
Pacific (N)	Albatrosses, shearwaters, fulmars, gulls, auks (<i>Black-footed albatross, Short-tailed albatross</i>)	29
Pacific (S)	Petrels, tropicbirds, albatross, shearwaters (<i>White-capped albatross, Salvin's Albatross, Giant Petrel</i>)	3
Inland: Lake	Piscivorous birds, e.g. mergansers, cormorants	1

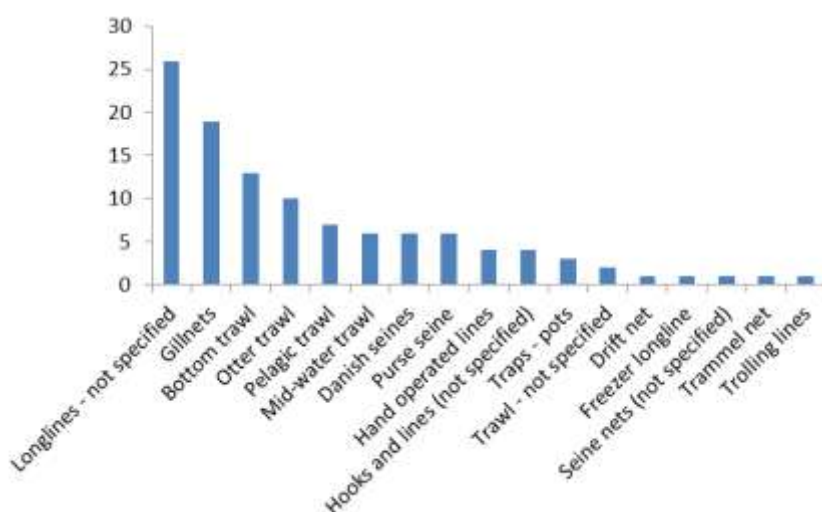


Figure 1 Number of conditions (111) triggered relating to seabird bycatch, by gear type

A fishery certification is valid for five years as long as conditions continue to be met on time, as reviewed by CABs at annual surveillance audits. A total of 31 fisheries where a condition relating to seabird bycatch was raised on assessment, have subsequently satisfied the condition with action. These actions are listed in Table 3. For most of the conditions where a lack of information on impacts was the cause of the precautionary low score at certification, when the fishery provided additional information it was possible to reassess the impact as sustainable (*). In only two cases was the impact found to be of potential detriment to seabird populations, and in both of these cases action was taken by the fishery to mitigate impacts (SA hake, NZ hoki).

Table 3 Conditions pertaining to seabird bycatch closed during certification period, and resulting outcome

Fishery (combined where conditions the same)	Current status	PI	Score	Reason	When closed	Re-scored at	Outcome
Alaska flatfish (BSAI): <ul style="list-style-type: none"> • Alaska plaice • Arrowtooth flounder • Flathead sole • Northern rock sole • Yellowfin sole 	Certified	Pre FAM	75	Lack of information - impacts (direct)	Year 2	90	Updated data on seabird bycatch for years 2007-2010 provided by government agency, and fishery-specific estimates of bycatch for combined trawl fisheries compared to population estimates of seabirds species indicates no conservation concern for any species taken.*
Alaska Pacific cod (BSAI)- Longline	Certified	Pre FAM	75	Lack of information - bycatch numbers	Year 2	90	Fishery-specific estimates of bycatch for fishery compared to population estimates of seabirds species for years 2007-2010 indicates no conservation concern for any species taken.*
Alaska Pacific cod (BSAI) - Trawl	Certified	Pre FAM	75	Lack of information - impacts (direct)	Year 2	80	Updated data on bycatch of short-tailed albatross satisfied requirements - no reported takes of short-tailed albatross in trawl fishery between 2007-2010, so no population impact.*
Alaska flatfish (GOA): <ul style="list-style-type: none"> • Arrowtooth flounder • Flathead sole • Northern rock sole • Rex sole • Southern rock sole 	Certified	Pre FAM	75	Lack of information - impacts (direct)	Year 2	90	Updated data on seabird bycatch for years 2007-2010 provided by government agency, and fishery-specific estimates of bycatch for combined trawl fisheries compared to population estimates of seabirds species indicates no conservation concern for any species taken.*
Alaska Pacific cod (GOA)-Longline	Certified	Pre FAM	75	Lack of information - bycatch numbers	Year 2	90	Fishery-specific estimates of bycatch for fishery compared to population estimates of seabirds species for years 2007-2010 indicates no conservation concern for any species taken.*
Alaska Pacific cod (GOA) -Trawl	Certified	Pre FAM	75	Lack of information - impacts (direct)	Year 2	80	Updated data on bycatch of short-tailed albatross satisfied requirements - no reported takes of short-tailed albatross in trawl fishery between 2007-2010, so no population impact.*
Hastings fleet Dover sole trammel net	Certified	Pre FAM	75	Lack of information - bycatch numbers	Expedited (1-2)	85	Recording of bycatch by fishermen undertaken and reported to government conservation agency, who indicated no conservation risk with current bycatch in this fishery.*
Hastings fleet pelagic herring drift net	Certified	Pre FAM	75	Lack of information - bycatch numbers	Expedited (1-2)	80	Recording of bycatch by representative sampling and reported to government conservation agency, who indicated no conservation risk with current bycatch in this fishery. Logbooks updated to allow voluntary recording of ETP mortalities.*
Lake Hjälmaren pikeperch fish-trap and gillnet	In re-assessment	Pre FAM	75	Lack of information - impacts (direct)	Year 2	80	Recording of bycatch implemented and as only one cormorant reported taken during year, impact on populations of birds not a concern for this fishery.*

Fishery (combined where conditions the same)	Current status	PI	Score	Reason	When closed	Re-scored at	Outcome
New Zealand hoki - Mid water trawl	Certified	Pre FAM	77	No effective mitigation measures	Year 2	85	Mitigation measures implemented (tori lines) and trend data shows decrease in mortality of species most at risk as direct result of changes in fishing practices (offal discharge management).
New Zealand hoki - Mid water trawl	Certified	Pre FAM	75	Lack of information - support strategy	Year 4	80	Acceptable impacts on organisms determined through Level 1 and Level 2 ERAs for seabirds undertaken. The hoki fishery was not thought by experts to represent an especially high risk for seabird populations, as long as effective management measures, including mitigation, are in place.
North Eastern IFCA sea bass Gillnet	Withdrawn	Pre FAM	75	Lack of information - impacts (direct)	Year 2	80	Recording of bycatch undertaken by fishers and few bird captures reported, likely because fishery takes place in winter and seabirds vulnerable to bycatch have gone elsewhere. *
Norway North East Arctic saithe, North Sea saithe: <ul style="list-style-type: none"> • Demersal trawl • Gillnet • Danish seine 	Certified	Pre FAM	75	Lack of information - impacts (direct)	Year 5	RA: 85	All bycatch is required to be reported in the e-logbook, including seabirds. Records of seabird catches are extremely rare. Norwegian conservation agency has not identified any cause for concern with respect to bycatch in the fishery.*
Pacific hake mid-water trawl	Certified	Pre FAM	70	Lack of information - bycatch numbers	Year 2	90	A report on seabird bycatch was provided making it possible to qualitatively assess impacts on seabirds. In future all Pacific hake fleets will have 100% at-sea observer or electronic monitoring.
PFTA North Sea herring - Pelagic trawl	Certified	Pre FAM	75	Lack of information - bycatch numbers	Year 3	85	Recording of ETP interactions implemented on all vessels. No interactions have been recorded so far. *
Portugal sardine purse seine	Certified	2.3.1	75	Lack of information - impacts (direct)	Year 3	80	Quantitative data on seabird bycatch provided through research project and catches of Balearic shearwater noted, but impacts were considered highly likely to be within requirements for protection of species.*
Portugal sardine purse seine	Certified	2.3.3	60	Lack of information - support strategy	Year 3	80	Information from research project sufficient to measure trends and support a strategy for protection of ETP species.
South Africa hake trawl <ul style="list-style-type: none"> • <i>Merluccius paradoxus</i> • <i>M. capensis</i> 	Certified	Pre FAM	70	Lack of information - impacts (direct)	Year 4	80	Quantitative data on seabird interactions collected from industry-funded research project and trained seabird observers on some vessels. Data showed that seabird bycatch is a bigger problem than initially thought, and mitigation measures (tori lines) implemented and shown to be effective at reducing impact.
Western Australian rock lobster	Certified	Pre FAM	75	Lack of information - impacts (direct)	Year 1	80	An ERA was undertaken for the fishery and seabirds were assessed as low risk. *

3. CONCLUSIONS

Overall, the results of this study were in line with those found in the ABC study in that most of the conditions raised relating to seabird bycatch were triggered to improve information on either bycatch numbers or impacts on populations. A recent paper by Small et al (2012) indicated that few fisheries have sufficient levels of observer coverage to be able to estimate bycatch rates of seabirds by species, something that is recognized in a number of MSC certified fisheries where information conditions were triggered.

Conditions that have been closed have shown improvements in the collection of fishery-specific seabird data, either through research projects, collection of data in logbooks or registers or improved observer coverage. In most cases, seabird bycatch was found to be negligible. In the NZ hoki and SA hake fisheries, where seabird impacts were higher, mitigation measures were implemented and are subject to ongoing monitoring. Both of these fisheries were initially assessed in the Pre-FAM era, and had a specific requirement relating to bycatch mitigation applied to them. The current MSC CR refers to measures, partial strategy and strategy for managing bycatch but does not specifically refer to best practice bycatch mitigation measures.

A recently submitted paper (Agnew et al., in press) identifies two specific problems that the MSC has faced since its inception, namely how to develop specific operational interpretations of a sustainability standard that are valid in all fishery conditions (ecological and socio-economic); and how to maintain a credible and reliable standard as scientific understanding and accepted *best practice management* change over time.

In order to develop the Standard so that it represents the MSC's stated aim of being in line with best practice, in 2013 the MSC began implementing a Fisheries Standard Review. As part of this review process the MSC will be considering how best practice in bycatch management, as outlined in the FAO International Guidelines on Bycatch Management and Reduction of Discards, could be more effectively addressed. Consideration will be given to issues such as appropriate levels of observer coverage to monitor bycatch and mitigation and whether requiring continuous improvement in bycatch numbers is appropriate in the outcome-based MSC Standard.

The MSC welcomes stakeholder participation in both the fisheries assessments themselves and in the wider policy development context. The MSC's Fisheries Standard Review will be undertaken throughout 2013. There are two particular consultation periods where stakeholder expertise is specifically sought on the options proposed, an initial consultation from 22 April to 17 May and a second consultation later in the year (Sept-Oct). Information on specific projects being investigated under the Fisheries Standard Review and the current status of the projects, links to consultation documents and contact details can be found on the MSC Policy Microsite³.

As has been shown by the analysis (particularly Table 1) the cause of uncertainty, and reduced scores, in MSC assessments is very often due to lack of data – on the actual level of bycatch, on the impact on seabird populations, and on the status of those populations themselves. A major contribution to the assessment of sustainability in seabird impacts would be the ready availability of information on the following:

³ <http://improvements.msc.org/database/review-of-the-principles-and-criteria-for-sustainable-fishing>

- Temporal and spatial distribution of seabird species (mapped) that can be compared to fisheries for overlap;
- Quantitative data on seabird bycatch;
- Risk assessments for a seabird species in relation to particular fisheries;
- Population status of seabirds, and estimates of fisheries' impact on species or populations; and
- Manuals of best practice mitigation measures, particularly for gears where these are not widely known, e.g. gillnets.

In situations where the Risk-Based Framework is used to score bycatch and ETP components, the involvement of stakeholders with knowledge of the potential bycatch species is particularly important.

Stakeholders and experts who are interested in receiving updates when fisheries enter assessment, announce a site visit, publish a draft report for public comment or issue a certification decision (amongst other activities) can sign up to receive fisheries updates on the MSC website⁴.

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⁴ <http://www.msc.org/newsroom/updates>