Agreement on the Conservation of Albatrosses and Petrels

Seventh Meeting of the Seabird Bycatch Working Group

La Serena, Chile, 2 - 4 May 2016

Risks posed to ACAP species from net fishing methods other than gillnet and trawl

Igor Debski, Cristián G. Suazo, Oli Yates, Juan Pablo Seco Pon, G. Barry Baker

SUMMARY

A review of the literature and available data found limited information on the risk posed to ACAP species by net fishing methods other than gillnet and trawl. However, of these methods, purse seine is the most likely to pose risk to ACAP species. Other methods such as boat seine may also pose some risk. Further data collection and analysis is encouraged to ensure adequate information is available to identify, and manage, any appreciable bycatch risks.

RECOMMENDATIONS

1. The Working Group encourage the submission, to future SBWG meetings, of papers or other information on the extent of risk to ACAP species posed by net fishing methods other than gillnet and trawl.
2. The Working Group consider whether existing information is sufficient to warrant the development of best practice mitigation guidance for purse seine fisheries.

Riesgos asociados a los métodos de pesca con redes distintos de las redes de enmalle y de arrastre para las especies del ACA

RESUMEN

Una revisión de la bibliografía y de los datos disponibles permitió concluir que se cuenta con escasa información sobre el riesgo para las especies del ACAP derivado de los métodos de pesca con redes distintos de las redes de enmalle y de arrastre. Sin embargo, de todos ellos, la pesca con redes de cerco de jareta es el método que probablemente constituya el mayor riesgo para las especies amparadas por el ACAP. Otros métodos, como el que consiste en subir las jábegas a bordo, también pueden constituir un cierto riesgo. Se alienta a recopilar y analizar datos en mayor profundidad a fin de garantizar la disponibilidad de información adecuada para la identificación y ordenación de todo tipo de riesgo observable de captura secundaria.

RECOMENDACIONES

1. El Grupo de Trabajo recomienda que en las reuniones futuras del GdTCS se presenten documentos o información de otra índole sobre la gravedad del riesgo que corren las especies del ACAP derivado de los métodos de pesca con redes distintos de las redes de enmalle y de arrastre.
2. El Grupo de Trabajo examinará si la información existente alcanza para garantizar la elaboración de una guía sobre las mejores prácticas en lo que refiere a medidas de mitigación para las pesquerías con redes de cerco de jareta.

Risques posés par les méthodes de pêche au filet autres que le filet maillant et le chalut aux espèces inscrites à l'ACAP

RÉSUMÉ

Un examen de la documentation et des données disponibles a révélé peu d'informations relatives aux risques posés par les méthodes de pêche au filet autres que le filet maillant et le chalut aux espèces inscrites à l'ACAP. Parmi ces méthodes, la pêche à la senne coulissante est toutefois la plus susceptible de présenter des risques pour les espèces inscrites à l'ACAP. D'autres méthodes, comme les sennes de bateaux, peuvent également comporter des risques. Collecter davantage d'informations et mener davantage d'analyses est encouragé, en vue de garantir que des données adéquates soient disponibles afin d'identifier et de gérer tout risque tangible de capture accessoire.

RECOMMANDATIONS

1. Que le groupe de travail invite à soumettre aux prochaines réunions du GTCA des documents, ou d'autres informations, relatifs à l'étendue des risques qu'impliquent les méthodes de pêche au filet autres que le filet maillant et le chalut.
2. Que le groupe de travail détermine si les informations existantes sont suffisantes pour assurer le développement des orientations pour les bonnes pratiques d'atténuation dans la pêche à la senne coulissante.

1. BACKGROUND

As highlighted in SBWG6 Doc 07, a wide variety of net fishing gear other than gillnet and trawl exists, but information on the risks posed to seabirds by these methods is limited, largely due to the paucity of independent observer coverage in these fisheries. Further, it is likely that any risk will vary greatly between gear types. This paper aims to summarise existing information relevant to determining which of these gear types pose any appreciable risk to ACAP-listed species, to identify which gear types may require the development and use of mitigation strategies. Fishing method terminology used here follows that defined in SBWG6 Doc 07.

2. REVIEW OF EXISTING PUBLICATIONS AND STUDIES

Baker & Hamilton (2016; SBWG7 Inf 11) provide a comprehensive global review of the impacts on seabirds of vessels using purse seine fishing gear targeting pelagic fish. The review covered material available up to 2014. The paper also provides general background to the fishing method. Of the case studies reviewed there were few bycatch records of ACAP-listed species, although attendance at vessels of a number of ACAP-listed species was noted in one case study and a bycatch issue with the closely related flesh-footed shearwater was reported in another (where mitigation options were developed).

ATF-Chile (2012) reported preliminary records on which included 22 seabirds caught during 10 observed fishing events in purse seine fisheries targeting sardine and anchovy in 2011 in the Humboldt Current, central Chile. Then, an updated review on the documented seabird bycatch in Chile by Suazo et al. (2014) informed on 10 seabird species involved as bycatch during industrial and small-scale purse seine along the Chilean section of the Humboldt Current System (18º-39ºS) also including non-diving species such as gulls in its northern section (Table 1). In addition, Suazo et al. (2016; SBWG7 Doc 20) provide further characterisation of seabird bycatch in small-scale purse seine fisheries in Chile. The bycatch reported includes the ACAP-listed pink-footed shearwater. Suazo et al. (2016) make recommendations for further information gathering and mitigation options.

Table 1. Species involved on bycatch events during purse seine fishing in Chile (modified from Suazo et al. 2014).

Common name	Species	Purse seine fishing scale [(1)]
Pink-footed shearwater (ACAP species)	*Ardenna creatopus*	Industrial, small-scale
Sooty shearwater	*Ardenna grisea*	Industrial, small-scale
Peruvian pelican	*Pelecanus thagus*	Industrial, small-scale
Peruvian booby	*Sula variegata*	Industrial, small-scale
Guanay cormorant	*Phalacrocorax bougainvillii*	Industrial, small-scale
Neotropical cormorant	*P. brasilianus*	Small-scale
Humboldt penguin	*Spheniscus humboldti*	Industrial, small-scale
Magellanic penguin	*S. magellanicus*	Industrial, small-scale
Grey gull	*Leucophaeus modestus*	Small-scale

(1) Updated from Suazo et al. (2014) for some species

Oliveira et al (2015) document seabird bycatch risk in Portuguese mainland coastal fisheries, using observer data and interviews with fishermen. Although data were limited the results suggested that purse seine fisheries posed substantial seabird bycatch risk, with a recorded catch per unit effort of 0.11 birds per fishing event. This bycatch particularly affected the ACAP-listed Balearic shearwater. Set gillnets were also found to capture a diversity of seabird species, including Balearic shearwater.

3. NEW ZEALAND FISHERIES DATA

To supplement existing published data, we provide a brief summary of relevant observer data from New Zealand.

Recent fishing effort, observer coverage, and observed seabird interactions in New Zealand purse seine and Danish seine fisheries are summarised in Table 2. Data is shown for three fisheries: purse seine targeting skipjack tuna, purse seine targeting mackerel species and various other fish stocks, and Danish seine targeting snapper, gurnard, and various other fish stocks.

Over the last four years more than 400 purse seine fishing events have been observed, and only two seabird interactions were recorded: one white-faced storm petrel caught in the net, and one Buller's shearwater that flew into the vessel superstructure. Both birds were released alive. Observer coverage in purse seine targeting other stocks has been relatively low, and no seabird interactions have been observed. Approximately 100 Danish seine fishing events were observed in the last two years, with one common diving petrel observed caught in the net, and released alive.

Table 2. Summary of recent fishing effort, observer coverage, and observed seabird interactions in New Zealand purse seine and Danish seine fisheries.

Year	Total effort (sets)	Observed effort (sets)	Seabird interactions	Details
Purse seine targeting skipjack tuna				
2014/15	493	102	2	1 white-faced storm petrel released alive from net 1 Buller's shearwater hit vessel and released alive
2013/14	475	95	0	
2012/13	479	112	0	
2011/12	466	113	0	
Purse seine other targets				
2014/15	490	9	0	
2013/14	573	15	0	
Danish seine				
2014/15	580	83	0	
2013/14		19	1	Common diving petrel, release alive from net

4. CONCLUSIONS

All the publications and studies reviewed in Section 2 describe bycatch in purse seines, a category of surrounding nets. There was very limited documentation of bycatch in other types of net fisheries defined in SBWG6 Doc 07 (seine nets, dredges, lift nets or falling gear), though in Section 3 we provide a brief overview of observer data from the New Zealand Danish seine (a category of seine nets) fishery.

We have found that purse seine fisheries can pose significant bycatch risks to ACAP-listed species (e.g. pink-footed shearwater along the Humboldt Current and its Pacific migration), and work has been undertaken in some fisheries to develop mitigation solutions. No substantial bycatch risk to ACAP-listed species was identified for fisheries using other net methods, though data was extremely limited.

We encourage the collection, and reporting to SBWG, of further data on any relevant seabird bycatch risks from these fishing methods. This will allow more detailed assessment of risks posed to ACAP-listed species, and inform the development and implementation of any mitigation actions required.

REFERENCES

ATF-Chile. 2012. Informes embarque exploratorio en pesquerías de cerco de Sardina común (*Strangomera bentincki*) y Anchoveta (*Engraulis ringens*) [Report on exploratory records in Purse seine fisheries for Sardine (*S. bentincki*) and Anchovy (*E. ringens*). Albatross Task Force – Chile, BirdLife International.

Baker, B.; Hamilton, S. 2016. Impacts of purse-seine fishing on seabirds and approaches to mitigate bycatch. SBWG7 Inf 11, Seventh Meeting of the Seabird Bycatch Working Group, La Serena, Chile, 2 - 4 May 2016.

Oliveira, N.; Henriques, A.; Miodonski, J.; Pereira, J.; Marujo, D.; Almeida, A.; Barros, N.; Andrade, J.; Marçalo, A.; Santos, J.; Oliveira, I.B.; Ferreira, M.; Araújo, H.; Monteiro, S.; Vingada, J.; Ramírez, I. 2015. Seabird bycatch in Portuguese mainland coastal fisheries: An assessment through on-board observations and fishermen interviews. *Global Ecology and Conservation* 3: 51–61.

Suazo, C.G., Cabezas, L.A., Moreno, C.A., Arata, J.A., Luna-Jorquera, G., Simeone, A., Adasme, L., Azócar, J., García, M., Yates, O. & Robertson, G. 2014. Seabird bycatch in Chile: A synthesis of its impacts, and a review of strategies to contribute to the reduction of a global phenomenon. *Pacific Seabirds* 41: 1–12.

Suazo, C.G.; Cabezas, L.A.; Yates, O. 2016. Collaboration on technical innovation towards the reduction of seabird bycatch in purse seine fisheries. SBWG7 Doc 20, Seventh Meeting of the Seabird Bycatch Working Group, La Serena, Chile, 2 - 4 May 2016.