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Seabird Bycatch Mitigation Fact Sheets

Birdlife International

Summary

Birdlife International in association with ACAP (the Agreement for the Conservation of Albatrosses and Petrels) has produced a series of 15 fact sheets on the seabird bycatch mitigation measures available to reduce seabird bycatch in longline and trawl fisheries. The fact sheets, which are available in several languages, assess the effectiveness of each seabird bycatch mitigation measure, highlight their limitations and strengths, and make best practice recommendations for their effective adoption. They are designed to help decision-makers, both at the management level as well as onboard fishing vessels, choose the most appropriate measures for their longline and trawl fisheries. Fact sheets covering mitigation measures appropriate to the target fisheries in the South Pacific Regional Fisheries Management Organisation are available on the RSPB web site.

Introduction

Fisheries bycatch is the single greatest threat facing many seabird populations. Albatrosses in particular are under extreme pressure with 17 of the 22 species threatened with extinction (Birdlife International, 2012). They have life history traits that make them especially vulnerable: late breeding (10+years), single egg (annually or every second year) and naturally high adult survivorship. Consequently even small changes to adult survivorship caused by deaths in fisheries can result in population declines.

Seabirds are most vulnerable to mortality on longline hooks when setting, while baited hooks are still sinking below the diving range of birds. The danger time for seabirds is determined by the sink rate of the line, the diving prowess of the birds, and the use or not of seabird deterrents. Seabirds can also be hooked and potentially injured during line hauling when uneaten baits become available again.

Mortality of albatrosses and petrels in trawl fisheries has been identified as a major threat. Birds can be killed by collisions with netsonde cables, warp cables and paravanes; and through entanglement with the net.

Mitigation measures

There are a range of simple, inexpensive, yet effective mitigation measures available that, when used conscientiously, can reduce the number of seabirds killed in fishing operations. A mitigation measure is defined as a modification to gear design or fishing operation that reduces the likelihood of catching seabirds.

In trawl fisheries, mitigation measures are based on the principle of deterring birds from coming into contact with the warp, paravane or netsonde cables, or by reducing the attractiveness of the vessel by managing discharge of offal/factory waste. The use of streamer lines and management of offal and discharge management are two such tools (Fact Sheets #13 and #14).

In demersal longline fisheries, seabird bycatch mitigation is most effective when combinations of measures are used. These are often divided into 4 categories:

1. Limit bird access to baited hooks (e.g. weighting lines (FS#2-4) underwater setting funnel (FS#6))
2. Deter birds from taking baited hooks (e.g. streamer (tori) lines (FS#1))
3. Reduce the attractiveness or visibility of the baited hooks (e.g. by not dumping offal e.g. FS#12)
4. Avoid fishing in areas and at times when seabird interactions are most likely and intense (night setting, area and seasonal closures)

To ensure success, the key is to ensure vessel speed, line-weighting regime and crew awareness are maintained so that baits sink below diving capability while still within the protection of steamer lines.

Fact sheets available.

The full set of 15 fact sheets, with translations in Japanese, Mandarin, Portuguese, Spanish and French are available at the following web site:

<http://www.rspb.org.uk/ourwork/policy/marine/international/advocacy/mitigationfactsheets.aspx>

Introduction

1. Demersal Longline: streamer lines
2. Demersal Longline: Line weighting – external weights
3. Demersal Longline: Integrated weight longlines
4. Demersal Longline: Line weighting - Chilean system
5. Demersal and Pelagic Longline: Night-setting
6. Demersal Longline: Underwater setting chute
12. Demersal and Pelagic Longline: Haul mitigation
13. Trawl fisheries: Warp strike

14. Trawl fisheries: Net entanglement

References:

Birdlife International 2012. Seabird conservation status, threats and priority actions: a global assessment. John P. Croxall, Stuart H. Butchart, Ben Lascelles, Alison J. Stattersfield, Ben Sullivan, Andy Symes and Phil Taylor