

Albatrosses and the fishing industry – a fishy business



'In many ways, the albatross may be the ultimate test of whether or not, as a species ourselves, we are serious about conservation: capable of co-existing on this planet with other species. Or are we going to sacrifice what's left of wisdom on the altar of short-term gain?'

HRH The Prince of Wales

Introduction

The world oceans are the home to a total of 22 albatross species, of which 19 are globally threatened with extinction. The major cause for this rapid decline in albatrosses is primarily the longline fishing industry as well as other methods of fishing. (Birdlife International 2005)

Long-line fishing vessels kill over 100 000 albatrosses every year (one every five minutes), as well as 200 000 other seabirds per year (Birdlife International 2005). The reason to why albatrosses are more vulnerable than other species is their extreme slow reproductive rate.

Albatrosses mate for life, and if one partner is killed, it can take years for the other albatross to find a new mate, if it does so at all. Most species lay only one egg every other year, and it can take the offspring up to ten years before they in turn start mating. Thus, albatrosses are being killed at a much faster rate than they can re-populate. (Leigh S. Bull 2007)

Wandering albatrosses can fly up to 10 000 km to find food for its chick, and when the birds get caught on longliners this also means the death of the chick. One parent can't take care of a chick alone, and at the same time find food for itself.

Longlining

Longlining is one of our major fishing techniques used both in the northern and southern hemisphere. Since albatrosses are found primarily in the southern hemisphere it's the vessels operating in these areas that possess a threat to albatross species.

Even though this fishing method may be conservation-oriented regarding the marine life, tending to catch mainly target species such as, Southern Bluefin Tuna *Thunnus maccoyii*, Swordfish *Xiphias gladius*, Patagonian toothfish *Dissostichus eleginoides*, (Svein Løkkeborg 1998), this fishing method is devastating for the seabird populations. Tarsker et al. (2000) estimates that over 250 000 seabirds may have been killed in the Southern Ocean Patagonian toothfish fishery alone, between 1996 and 1999. (Leigh S. Bull 2007).

Although this method of fishing doesn't catch everything in its path, as trawlers do, it is still a method that catches target species that are in fact threatened. The Southern Bluefin Tuna is listed as critically endangered on the IUCN Red List of Threatened Species.

Longline fishing vessels have lines that can be up to 130 km(!) long and carry up to 10,000 baited hooks. The most common bait used is squid. Foraging seabirds see the baited hooks as an easy meal and get caught on the hooks when trying to eat the bait. They then get dragged under the water surface and drown.

It is primarily during the setting and retrieving of the lines that albatrosses and seabirds are in danger of getting caught on the hooks. When they are set, the lines are more or less out of reach to the seabirds. (Leigh S. Bull 2007)

Due to their extremely large foraging ranges, the birds are not only vulnerable to fishing vessels in the close vicinity of their breeding areas, but are exposed to a much larger number of fishing vessels. (BirdLife International 2005)

Illegal, unreported and unregulated fishing counts for a third of albatross deaths. Getting to the root of the problem with pirate fishing could save many thousands of albatrosses from a horrible death.

Methods of reducing bycatch

There are a number of ways of drastically minimizing the number of seabirds caught by longline fishing vessels. I will describe a small selection of them below.

Underwater setting devices: The lines with baited hooks can be set through a funnel/chute that keeps the hooks out of reach from the seabirds. The effectiveness is influenced by sea conditions, load on the vessel (heavy load in the front of the boat makes the whole boat tip forward and this lifts the funnel out of the water making the lines available to the seabirds.) (Leigh S. Bull 2007)

Thawed/ Blue dyed-bait: Dyeing the bait blue is thought to reduce the seabird's ability to see the bait through camouflage. Thawed bait has a higher density than frozen and therefore sinks faster. Thawing and dyeing the bait blue is impractical for the crew, and birds may become used to the blue bait and eat it anyway. It is on the other hand safe to use and cheap. (Leigh S. Bull 2007)

Side setting: When setting the lines from the side of the vessel, the baited hooks get more time to sink before they reach the stern. (Leigh S. Bull 2007)

Night-Setting: Fewer birds are active at night and the birds that actually are foraging have a harder time seeing the baited hooks. In the Patagonian toothfish longline fishery in Kerguelen EEZ it has been reported that nightsetting reduced the bycatch of overall number of birds from 0.91 ± 1.72 birds per 1000 hooks during the day to 0.17 ± 0.82 birds per hook during the night. (Wimerskirch *et al.* 2000).

Bird-scaring lines: This includes all kind of lines/streamers that when deployed astern during setting of the lines, deters/scares birds from taking the baited hooks. (Brothers *et al.* 1999). This is a relatively effective way of reducing bycatch. Some studies show a bycatch rate close

to 0.00 birds per 1000 hooks using double/advanced Bird-Scaring lines. (Melvin *et al* 2001, Løkkeborg 2001)

Line weights: Weights on the lines make them sink faster, minimizing the time at the surface. Negative effects are crew safety and potentially harmful compounds accumulating in the sea environment. (Leigh S. Bull 2007)

It is hard to make comparative studies of these methods since sampling protocol usually differs, and the studies are so small that it is hard to get adequate data. It is also known that not all methods can be applied to all fishing vessels, and outer conditions can change the needs of individual fishing vessels.

Conservation projects for albatrosses and other seabirds

Agreement on the Conservation of Albatrosses and Petrels (ACAP)

This is an international legally binding treaty that requires the members to take specific measures to improve the conservations status of albatrosses and petrels. At the moment there are six member countries: Australia, Ecuador, New Zealand, Spain, South Africa and the UK. Another five countries, Argentina, Brazil, Chile, France and Peru have signed ACAP, and it is hoped that they will become party to the Agreement soon.

The FAO-International Plan of Action

The FAO- International Plan of Action was developed by the The United Nations Food and Agriculture Organization (FAO) in 1988 in order to work against seabird bycatch. The FAO encourages member countries to acknowledge their own seabird by-catch problem and to develop and use a *National Plan of Action* (NPOA), based on the recommendations listed in the IPOA (International plan of action). So far, twelve countries plus the European Union have either completed or started to develop an NPOA.

Save the Albatross Campaign (RSPB and BirdLife International)

Save the albatross was started in 2000, even though BirdLife International has been engaged in conservation of seabirds before that. The project wants to raise public awareness for the problem and urge governments to take radical actions to protect seabirds.

Save the albatross also works together with fisheries to inform about the methods that are available for decreasing the seabird bycatch.

The Save the albatross campaign is adopted by Volvo Ocean Race, that took place in 2005/2006. It is a sailing race that goes around the whole world and in 2006 is had it's final stop in Gothenburg, Sweden.

My personal comment on Save the albatross campaign:

A the time of Volvo Ocean Race I was working for BirdLife Sweden and I was responsible for representing Save the Albatross in Gothenburg during the days that the boats were reaching their goal.



Even though Volvo Ocean Race has “adopted” the campaign, they did nothing to promote the albatrosses in Gothenburg. I was promised to get a time for a press conference and time on stage and time for the Save the Albatross video to roll on the big screens during periods when nothing else was showing. When I arrived in Gothenburg I was promised all this, but upon meeting Volvo Ocean Race representatives, they totally ignored me and my colleagues.

We ended up not getting anything of what they had promised us. This only shows, that they only want to adopt the campaign to “look good”, but when it actually comes to contributing they are not interested. I find it sad that it has to be this way, and I am thankful that there still are people that continue to fight governments, companies, and other organizations to make this world a better place for seabirds and other threatened species. I

know how hard it feels to constantly have to go work against the current, and I admire the people that do it. Save the Albatross is a great project and I miss working with them.

References

Postnatal dispersal of wandering albatrosses *Diomedea exulans*: implications for the conservation of the species. H. Weimerkirch, S. Åkesson, D Pinaud. *Journal of Avian Biology* 37: 23-28, 2006

Reducing seabird bycatch in longline, trawl and gillnet fisheries. Leigh S. Bull, *Fish and Fisheries*, 2007, 8, 31-56

Seabird by-catch and bait loss in long-lining using different setting methods. Svein Løkkeborg, *ICES Journal of Marine Sciences*, 55, 145-149. 1998

Usefull websites:

www.savethealbatross.net

www.birdlife.org

www.rspb.org.uk



The author during her short career as “Albie the albatross”