

HELPING SEABIRDS SOAR: A COLLABORATIVE APPROACH

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Fishing activity is a major threat to New Zealand's seabirds and could threaten their populations, but positive work by the fishing industry, environmental interest groups, the Department of Conservation, and MFish is helping seabirds become safer at sea.

They are known as the symbol of the Southern Ocean. With their ability to circumnavigate the globe at soaring speeds, the majestic albatross is also at home on New Zealand's waves.

Eleven species of albatross and around 80 species of petrel, shearwaters, prions, and fulmars live for some or all of the year in our waters, making New Zealand's seabird population one of the most unique in the world.

New Zealand's seas provide a diverse set of resources for fishers and birds alike, but with each competing for their livelihood it's not a perfect coexistence. Birds are attracted to fishing vessels as a source of food and can accidentally become hooked on baited longlines, tangled or captured in nets, or injured or killed when they collide with trawl warps.

Some birds, particularly albatross, are long-lived, take a long time to breed, and produce very few chicks making them even more vulnerable to human induced impacts.

Stakeholders across the globe originally considered surface longlining to be one of the biggest threats to seabird populations, but in more recent years both bottom longlining and trawling were recognised as playing a part in the seabird bycatch issue.

Along with MFish's regulatory measures, commercial fishers and stakeholders have taken active roles in developing mitigation devices and techniques to help combat the seabird bycatch problem. And their work seems to be paying off. Recent bycatch figures indicate that there is an improved outlook for some seabirds in New Zealand waters.

JOINT APPROACH

Recently MFish, DOC, and stakeholder groups have taken a collaborative approach to testing potential mitigation techniques. A technical advisory group, made up of experts from MFish, DOC, Seafood Industry Council, World Wildlife Fund for nature (WWF), the Deepwater Group, and Forest & Bird were set up to design trials and assess the effectiveness of mitigation techniques for trawlers and surface longliners.

SURFACE LONGLINING

Both domestic and foreign owned vessels surface longline to catch tuna and swordfish off the South Island's west coast and on the north east coast of the North Island. The species most often caught by surface longlining are grey petrels, flesh-footed shearwaters, and Buller's albatross.



In 2006, 51 albatross were captured on 12 longline sets made by a foreign owned vessel fishing near the Kermadec Islands. This incident prompted the introduction of regulations that limited fishers to night setting of surface longlines, and strengthen the already compulsory use of tori lines (lines with brightly coloured streamers running along both sides of the warps acting as deterrents) during setting. These regulations have since been slightly relaxed to allow fishers to set during the day as long as their longlines have sufficient added weight to ensure hooks sink quickly.

MFish and DOC have good observer coverage aboard the foreign surface longline fleet and data collected to date has revealed a consistent, but relatively low catch rate of seabirds, typically less than one bird for every 10,000 hooks. The domestic fleet has less observer coverage but figures indicate a variable capture rate of between less than one to eight birds per 10,000 hooks. The foreign fleet sets between 0.6 and two million hooks per year while domestic surface longliners set between two and 10 million.

BOTTOM LONGLINING

Bottom longline also poses a threat to seabirds as they can get caught on hooks while lines are being set and hauled. White chinned petrels are most commonly caught by bottom longlining with occasional captures of various albatross species, shearwaters, and petrels.

Some bottom longline fisheries have made good progress in reducing their seabird interactions. In 2000-01 there were large catches of white chinned petrels in the ling autoline (an automated line setting and baiting device) fishery which sparked extensive research into the problem. The research showed that line weighting practices were necessary as part of a suite of measures introduced through a voluntary code of practice. The measures have resulted in a steady decline of seabird captures in the ling autoline fleet.

In 2007, there was another seabird mortality incident where a smaller bottom longline vessel, fishing for ling and bluenose near the Chatham Islands, caught 12 Chatham albatross (considered critically endangered by the World Conservation Union) and 22 Salvin's albatross.

The incident prompted the introduction of new regulations and bottom longliners now have two choices of mandatory mitigation techniques; setting their lines at night while using tori lines, or, setting their lines during the day using adequate weighting and tori lines. It is too soon to see the effect of these regulations in the estimates of total seabird captures.

TRAWLING

Seabird interactions occur on trawlers in two ways; birds can collide with trawl warps (cables that drag the trawl net) when feeding on fish waste, or they can get caught in the mesh of trawl nets as they are hauled in. White chinned petrels, sooty shearwaters, and white capped albatross are most often caught by trawlers.

Some species, particularly white-capped albatross and Antipodean albatross, can also become very aggressive in their feeding and large aggregations often form around vessels creating a feeding frenzy over offal and fish discarded from the trawlers.

“Albatross are like flying anaconda. They are programmed to swallow large amounts of food and when a food opportunity arises they get in tooth and nail. This is when the problem arises – they lose concentration and sense of proportion of hazards,” says Richard Wells, a fisheries specialist working for the Deepwater Group Ltd.

The highest risk area for seabird captures in deep water trawl fisheries is around the Snares and Auckland Islands. During the summer there can be up to 30 vessels in the squid fishery at any one time. Adding to this, there is also an abundance of nesting seabirds in the region looking to feed their chicks. Consequently, the fishery typically has the highest seabird capture rates of any of New Zealand’s trawl fisheries.

In 2005, the technical advisory group coordinated a large experiment in the squid trawl fishery which aimed to find the most effective of three commonly used mitigation methods; tori lines, bafflers (similar to tori lines but a more rigid structure with streamers hanging off the booms) and warp scarers (rope with attached streamers to form a bottle brush that hangs below the trawl warps).

“The experiment paved the way for improved collaboration between the factions that were interested in reducing seabird catches. Since the experiment, that group has gone on in a useful way to discuss, research, and consider new options and ideas,” says Richard.

In addition, the deep water trawl fleet has put in place vessel management plans (VMPs) which document how individual vessels will manage offal and discards and minimise their attractiveness to seabirds. Although this is a non-regulatory measure, MFish, through the observer programme, monitors and audits vessel performance against these VMPs.

To make offal and discards less attractive to birds, fishers and the technical advisory group have trialled mincing offal and dispersing it as a fine paste. It was found that mincing offal only reduced the numbers of the larger albatross (the royal and wandering albatross species), while keeping all fish waste on board significantly reduced the numbers of seabirds foraging around the vessel; unfortunately this is very difficult for most vessels to achieve.

ONGOING RESEARCH

Batching offal, which involves dumping offal in random bursts to break the continuous flow, and hopefully lose the interest of seabirds, is another option. Trials of this technique have been conducted on various vessels around the country and the technical advisory group is soon to review the results.

Manager of marine conservation services at DOC, Johanna Pierre, says they have been working with industry and other stakeholders on solutions to the seabird bycatch risk, created by waste discharge, for about four years now.

“Our work started through the Conservation Services Levy, but has grown significantly with the benefit of Crown funding


since then. We’re very excited about the management context for this work, and contributing to the development of robust fisheries management regimes,” she says.

Preliminary seabird capture figures based on data collected by MFish/DOC observers indicate that catch rates in some fisheries have dropped in recent years. The biggest decreases have occurred in the squid fishery, around the Snares and Auckland Islands, where the estimated total captures were down nearly 70 percent in 2006-07 when compared to 2004-05. White capped albatross captures have also reduced 90 percent from 2004-05 to 2006-07. This is likely due to the introduction of both voluntary and regulatory mitigation measures.

MFISH STANDARD

In 2004 New Zealand was one of the first countries in the world to establish a National Plan of Action (NPOA) for the conservation and management of seabirds. The plan is a framework to reduce seabird mortality.

The government is in the process of reviewing the NPOA and MFish released a draft seabird standard last year. A stakeholder advisory group has been established to develop ideas to further the standard and technical workshops have been set up to develop robust methods of analysing the risk to seabirds. The revised NPOA and the seabird standard are expected to be completed later this year.

“The intent of the standard is to spell out what government wants to achieve for the management of seabirds. It will provide an effective and solid foundation for seabird management,” says Steve Halley, national manager of the MFish environmental team. 



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