



## The Impact of Longline and Gillnet Fishing on Seabirds

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### WHAT IS THE CONCERN?

Longline and gillnet fishing can pose inadvertent risks to some types of seabirds. In longline fisheries, baited hooks are attached to **longlines** and set over the side or stern of the fishing vessel. Seabirds attracted to the bait can be hooked, dragged below the surface and drowned. Over 10 million hooks are set annually in British Columbia longline fisheries. Prior to 2000, 100 to 200 seabirds were caught each year in these longline fisheries. In offshore areas the species of concern are shearwaters and albatross, which often out-compete other seabirds for the bait on longline hooks.

On a global scale this poses serious conservation concerns for several albatross species whose numbers have remained low since the 1900s, including Black-footed, Laysan and the endangered Short-tailed albatross.

**Gillnets** also have the potential to drown seabirds. Used mainly to harvest salmon and herring in inshore waters throughout coastal British Columbia, gillnets drift at the surface where diving seabirds, particularly murre and auklet species, can become entangled in the net. The number of seabirds caught in gillnets varies widely according to the location and timing of the fishery. Surveys conducted between 1996 and 2001 estimate that several thousand seabirds, including the Common Murre and Rhinoceros Auklet, may be entangled every year in gillnets in the BC fishery.

### WHY IS IT IMPORTANT?

The number of seabirds hooked or entangled in BC's on-bottom longline fisheries is relatively low. When added to the number of seabirds lost to the larger North Pacific near-surface longline fisheries, however, BC's numbers contribute to a cumulative effect that threatens the recovery of several seabird species, especially albatross. Gillnet fisheries also have the potential to entangle seabird species whose populations are currently at risk, such as the Marbled Murrelet.

### WHAT ARE WE DOING ABOUT IT?

Fortunately there are several simple ways to significantly reduce seabird bycatch in both longline and gillnet fisheries.

#### *Longline Fisheries*

Tori lines were pioneered by Japanese tuna longline fishermen. Coloured streamers that flap in the wind to scare birds away from longlines are attached



COMMON MURRE



PAIRED TORI, OR STREAMER LINES, ARE USED TO SCARE SEABIRDS FROM BAITED LONGLINES. PHOTO BY ROBERT AMES

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to tori lines mounted on poles at the stern of the vessel and connected to a floating buoy. Trials in the Alaskan sablefish and Pacific cod fisheries show that, when coupled with proper weighting to rapidly sink the longline, paired tori lines can reduce seabird bycatch by 90% – 100%.

In 2000, the BC halibut industry recommended that all harvesters use tori lines in longline fishing. In 2002, this became a mandatory condition of licence in the commercial halibut, sablefish and rockfish longline fisheries. Fisheries observers have monitored about 20% of longline fishing trips in BC, collecting data on seabird catches. In 2006, the monitoring program, using fisheries observers or [electronic \(video\) monitoring](#), was extended to all longline vessels. This program will help to assess how well these measures are working.

### *Gillnet Fisheries*

Research in Washington State has shown that seabird entanglement in gillnets is reduced significantly when the upper mesh of monofilament gillnets are replaced by opaque (white) nets. In Canada multistrand gillnet mesh, not monofilament mesh, is used in the salmon gillnet fishery in order to protect non-targeted species like coho. A secondary benefit may be a reduction in the number of birds lost to the entanglement, but this has not been well documented by field research. In addition, the Washington State research showed that more seabirds were entangled at dawn and dusk than during the day. In British Columbia gillnet openings are often restricted to daylight hours and nets are left in the water for short periods and frequently monitored to release non-target species. These selective fishing methods can also reduce seabird entanglement.

### **WHAT MORE CAN BE DONE?**

The BC fishing industry recognizes that both longline and gillnet fishing have the potential to adversely affect some species of seabirds, including several whose numbers are low. Although the impact of BC fisheries on seabirds may be smaller than in the larger, more widespread fisheries such as the tuna longline fishery, the industry believes that it is important to reduce all seabird mortalities to the lowest extent possible. As many of these seabirds migrate throughout the Pacific Ocean, it is important to pressure all fishing nations to adopt measures to reduce impacts to seabirds. Market based measures, such as labelling BC longline seafood products as "seabird friendly", are one way of letting consumers know that this is an issue of global concern.

Learning more about areas where seabirds feed and molt and using this information to plan fishing activity will help reduce seabird bycatch. Up-to-date information on the effectiveness of tori lines, multistrand gillnets and daytime fisheries in reducing seabird entanglement will help to develop additional ways of addressing this issue.

### **FURTHER READING**

*Solutions to Seabird Bycatch in Alaska's Demersal Longline Fisheries.* E. Melvin, J.K. Parrish, K. S. Dietrich, O.S. Hamel. 2001. Washington Sea Grant Program Project A/FP-7.

*An Assessment of Seabird Bycatch in Longline and Net Fisheries in British Columbia.* 2005. J.L. Smith and K.H. Morgan. Canadian Wildlife Service Technical Report Series #401.



BLACK-FOOTED ALBATROSS