

spring and presumably travel to this spawning area.

A second foreign tuna longline fleet, made up of Korean and Japanese boats, operates in northern New Zealand. It mainly targets albacore tuna but high numbers of big-eye and yellowfin tuna may also be taken.

Fishery in danger of collapse

As with many New Zealand fisheries, tuna have been grossly over-exploited. Between 1980 and 1986 bluefin catch rates fell by 65 percent. In 1988, the drastic situation led New Zealand's Ministry of Agriculture and Fisheries (MAF) scientists and Australian and Japanese experts to suggest that the bluefin fishery be closed until there were clear signs of stock recovery. Only a 50 percent quota reduction occurred. MAF scientists were left to "hope for the right combination of environmental conditions ... to further slow the rate of ... decline".

As the southern bluefin catches have declined, other species of tuna (for which there are no quotas) have come under great pressure from longliners and the by-catch rates have increased. The tuna longline fishery may more aptly be described as a shark fishery in some areas. For example, 1200 sharks were taken when 650 tuna (including only 128 target bluefin) were taken by two boats off Poverty Bay. There is no limit to the number of other species such as mako and blue sharks or seabirds taken. Frequently, more seabirds than bluefin tuna are caught on the lines.

Longline mortality of NZ birds

In New Zealand waters, an average of between one and five birds die each time a bluefin tuna longline is set. About 5,000 lines are set annually, thus 5-25,000 birds are likely to be killed by foreign longliners each year. During the early 1980s, more than 10,000 foreign longlines were set annually, which would indicate that twice as many birds would have been drowned in this period.

The main species caught in New Zealand waters on foreign longlines are:

- Buller's mollymawk
- White-capped mollymawk
- New Zealand black-browed mollymawk
- Grey-headed mollymawk
- Wandering albatross
- Grey petrel
- Westland black petrel

There is not enough data to indicate exactly how many of each species are caught in New Zealand waters.

New Zealand breeding species reported caught elsewhere include:

- Light-mantled sooty albatross
- Giant petrel
- White-chinned petrel
- Southern skua

Worldwide, a yearly average of 107.9 million hooks were set between 1981-86 in the Japanese southern bluefin tuna fishery. Average catch rates for birds range from 0.35 - 1.6 per 1,000 hooks set, thus from 38-173,000 birds die annually. Tasmanian catch rates are among the lowest reported worldwide, but even they indicate that a minimum of 44,000 albatrosses die on longlines in the southern ocean each year. Not all birds die at sea, as

several albatrosses have been found fatally injured by longline hooks at their nests.

These figures take no account of the by-catch in other longlining fisheries. For instance, more than 30 boats fish in northern New Zealand's albacore longline fishery. Northern domestic commercial longliners and even amateur fishers probably affect species such as flesh-footed and black petrels, which are strongly attracted to baits on lines.



A Japanese longline boat off Tasmania (June 1988).
Photo: Nigel Brothers

The Auckland Island squid fishery

Since the late 1970s, a major squid fishery has existed around the Auckland Islands, 460 km south of mainland New Zealand. Up to 50 trawlers fish in the area from December to May. Most trawlers are Soviet, with some Korean and Japanese boats, chartered by New Zealand companies such as Independent Fisheries Ltd, Sealord Products Ltd and Fletcher Fishing Ltd (whose deep water interests were recently sold to Sealords). Many of the ships are the size of the Cook Strait ferries and are the same ones that work in other major New Zealand fisheries, such as the hoki and southern blue whiting fisheries. These trawlers have drowned nearly 11,700 fur seals during the last two West Coast hoki seasons. Nearly 1,800 of the threatened Hooker's sea lion may have died due to the Auckland Island squid fishery since 1978, where large numbers of seabirds are also killed.

Trawler mortalities

Disturbingly high numbers of birds are killed by the Soviet Auckland Island squid trawlers. Vast flocks of birds are attracted to food at the trawlers' sterns as offal is dumped and nets are hauled in. On the Soviet boats, a cable that runs from the boat to the net proves a deadly obstacle. Birds hit the cable, which can catapult through the air like a whip as the tension from the net varies. Those struck by this flexing cable may be killed or injured. The force of a blow from the wire is sometimes enough to sever birds' wings completely. Many birds become tangled in the wire, slide into the water and drown.

Thousands of white-capped mollymawks and sooty shearwaters may die in the fishery



Background: A Buller's mollymawk follows a fishing boat off the Snare. For those following longline boats, the attraction may prove fatal.
Photo: Alan Tenyson.

