

# Integrated and innovative

By Marieke Hilhorst

**I**ntegrated weighted longlines are not just a silver bullet for reducing seabird deaths, they are so good at catching fish instead of seabirds they are on track to be the golden bullet, says Malcolm McNeill, longline manager for Sealord, Nelson.

“Integrated weighted line, in my mind, is the closest thing in our fishery to the golden mitigation device,” Malcolm says.

The technology has inbuilt lead beads in each individual strand of Swivelline and requires no external attachments to gear or fishing methods. And because the weight

---

“What we’re aiming for is gear that both reduces the incidental mortality of seabirds and is widely used throughout these fisheries because it is fisher-friendly.”

---

distribution is constant, the sink rate has a lineal profile.

Two years of testing has highlighted the source of the gold. Not only is integrated weighted line extremely effective in reducing incidental seabird mortality (extensive trials in high-risk areas show reductions of more than 90 percent), it manhandles well during fishing operations, reduces the workload of manual line weighting, and catches more target fish species.

“Though it does have a higher cost, in the toothfish fishery it catches more of the target species than a manually weighted line so that cancels out the extra cost,” Malcolm says.

Weighting lines to make them sink more quickly and take baits beyond the reach of seabirds is a by-catch mitigation measure adopted in the New Zealand ling longline code of practice.

Until the development of integrated weighted lines, the only way to do this was by clipping five-to-six kilogram weights onto the backbone every 30–50 metres. However,



external weights pose issues for skippers, including carrying the extra tonnage, inefficiencies in the time taken to attach and remove the weights and risks to crew if heavy weights come back over the side too fast during the haul.

In 2002, New Zealand Longline, a Sealord and Amaltal joint venture company, won an \$11,000 grant to trial an integrated weighted autoline. The work was a collaborative experiment, with additional funding from the Australian Antarctic Division, Sealord, NZ Longline Ltd and Gourock. Fishing gear manufacturer Fiskevegn produced the lead core autoline.

Work on testing and improving the integrated weighted line is ongoing, Malcolm says. Both officially, and by skippers and crews who have begun to use the gear.

Official New Zealand trials have been carried out on the *Avro Chieftain* and *Janas*, two New Zealand Longline vessels. Their experiences have led to some improvements to fishing practices to make the integrated weighted line even more effective.

“While the integrated weighted line works well through the current autoline set up, on the *Avro Chieftain* we have installed a line setter to pull the line through the baiting machine so it is slack as it enters the water. When used



with an integrated weighted line this technique takes the line to 10 metres very quickly.”

Scientific trials into seabird catch rates and target fish catch rates have also been done within the areas covered by the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the

Australian toothfish fishery.

Normally, manual line weighting is required in these areas but exemptions were given to trial the new device. The outcome was more fish being caught. Good news travels fast and integrated weighted line is now being trialled in the French toothfish >

Photos by Dennis Bauman

Southern Seabird Solutions

### Conservation through Cooperation

Many threatened seabirds breed in New Zealand, but forage throughout the Southern Hemisphere. Because of this, they may be accidentally caught by any vessel, anywhere that does not use measures to reduce the risk to seabirds.

Fishermen have already done some great work in New Zealand to develop effective seabird mitigation techniques.

Southern Seabird Solutions is an alliance of industry, government and environmental interests that is working to build on these and then promote them in distant waters, working alongside fishermen in Southern Africa, South America and Australia.

Photo by Dave Hanford

**“This is our world. If we don't look after it, who will?”**  
 — Alex Aitken, winner of Birdlife International competition to find ways to stop hooking seabirds on longlines.

NEW ZEALAND LONGLINE | LER FISH | SANFORD LIMITED SUSTAINABLE SEAFOOD | MOANA PACIFIC FISHERIES LIMITED

fishery around Kerguelen Islands and Alaska.

However, Malcolm says it is unlikely that this gear can be a global golden bullet. While it can be used on most New Zealand autoline vessels, and has been found to be very effective, differences in fisheries around the world make it unlikely integrated weighted line can be the global answer to seabird mitigation.

There will always be a need, he says, for fishermen to identify the bird species in the area and how they are feeding, then try and reduce incidental by-catch using the range of mitigation devices and methods that are compatible with their fishing practice.

Where to from here? New Zealand Longline is working with Dr Graham Robertson of the Australian Antarctic Division comparing target species catch rates with un-weighted standard line and integrated weighted line.

“Graham is hoping to prove that integrated weighted lines will catch as much, if not more, of the target catch. The intention is that, if this proves to be true, even the illegal longline vessels will buy this gear and then we’ll have the spin-off of reduced seabird deaths within that fleet,” Malcolm says.

“We also want to develop similar gear for use in the Spanish-method demersal longline fisheries around the world as this is the main longlining method used for catching toothfish and other bottom dwelling fish species. What we’re aiming for is gear that both reduces the incidental mortality of seabirds and is widely used throughout these fisheries because it is fisher-friendly.” ■



Lead core autoline produced by fishing gear manufacturer Fiskevegn.

				
<b>Mike Sullivan</b> LL.B, LL.M (University of Washington) Senior Partner Fisheries Law (NZ & International), Law of the Sea, Fisheries Prosecutions & Fisheries Litigation - (Author of Brooker's Fisheries Law).	<b>Marty Logan LL.B</b> Partner Maritime Law, Fisheries Commercial Law & Litigation, Aquaculture.	<b>Peter Dawson</b> BA LLB LL.M (Cape Town) Partner Maritime Law, International Trade Law, Domestic and International Vessel Registration.	<b>Tim Spear LL.B</b> Associate Fisheries Commercial Law, Asset protection/Restructuring, Quota Aggregation, Administrative Appeals & Tribunals - (co-author of Commercial Fishers Guide to QMS).	<b>Wayne Jones LL.B</b> Solicitor Fisheries/Departmental Prosecutions, OSH and Bio Security.

**Experts in Fisheries prosecutions  
and investigations**

**OCEANLAW NEW ZEALAND** 

14 New Street, Nelson, PO Box 921, Nelson, New Zealand. Tel +64-3-548 4136. Fax +64-3-548 4135. Freephone 0800 Ocean Law. Website: www.oceanlaw.co.nz

A Regional Partner of **OCEANLAW INTERNATIONAL** 

181818 people