

# Fishers' bright ideas funded by industry

Lesley Hamilton



Whitianga commercial fisherman Adam Clow has helped develop a hydraulic gear setting arm to reduce seabird bycatch in the bottom longline fishery.

Innovative solutions to everything from dealing with bycatch to mitigating marine pollution have been coming in thick and fast as a result of a funding initiative by Seafood Innovations Limited and Fisheries Inshore New Zealand.

The Gear Innovation Pathway encourages fishers to come up with ideas that will benefit the whole fleet.

The funding, capped at \$20,000 for each research project and to a total of \$250,000 overall, will allow fishers to develop the idea at no, or little cost to themselves and encourages innovative solutions by the very people facing the issues daily.

Seafood Innovations general manager Anna Yallop said she was surprised and delighted with the

number and variety of the projects submitted so far, and is encouraging others to submit ideas in future funding rounds.

“Removing the hurdle of getting funding to develop and test their ideas is proving to be a great springboard to innovation. If, down the track, the innovation is suitable for taking to market there are options that FINZ and SIL have to scale the projects up.”

Dave Kellian is one of the most recent successful applicants, a fisher out of Leigh who is no stranger to coming up with innovative ideas to improve practices in commercial fishing. Kellian spent 20 years developing an underwater bait-setter to deter seabird strike on hooks and that is now being

trials by an Altair Fishing longline vessel.

Kellian's latest project is a solution to snap failure in the Southern bluefin tuna fishery.

On a longline vessel, a main line called a backbone has thousands of hooks attached to it by stainless steel snaps. The conventional snap has a spring mechanism and tuna can sometimes trigger the release of the conventional snaps when struggling on the line. Kellian has seen fish caught on his longline that have hooks and lines from previous captures and escapes from other vessels. There are significant losses of gear and fish in the highly migratory fishery due to failure.

"My conservative estimate would be that we lose roughly 200 high-value tuna per season due to clip failure," Kellian said. "I reckon I was losing a significant amount of gear and fish each season personally, which could potentially be a huge monetary loss when scaled up to the entire fleet." Preventing this loss would not only improve the efficiency of the fleet's operation but improve fish welfare, he said.

Kellian has designed and tested five new clips that mitigate snap failure by a self-locking mechanism that can only be opened by a crew member on the haul. He has now successfully applied for funding from the Gear Innovation Pathway to develop the plastic injection mould and produce a further 2000 trial snaps.

Another successful recipient of funding seeks to reduce seabird bycatch in the bottom longline fishery.

The collaboration is between fishers Adam and Phil Clow, Department of Conservation seabird liaison officer, Nigel Hollands and coastal engineer Peter Quilter, who have come up with a design for



Seafood Innovations Ltd general manager Anna Yallop.

a hydraulic gear setting arm.

The funding will allow the development and installation of the setting arm on the stern of the vessel. The arm will come down on the backbone during the setting of the gear and push the line

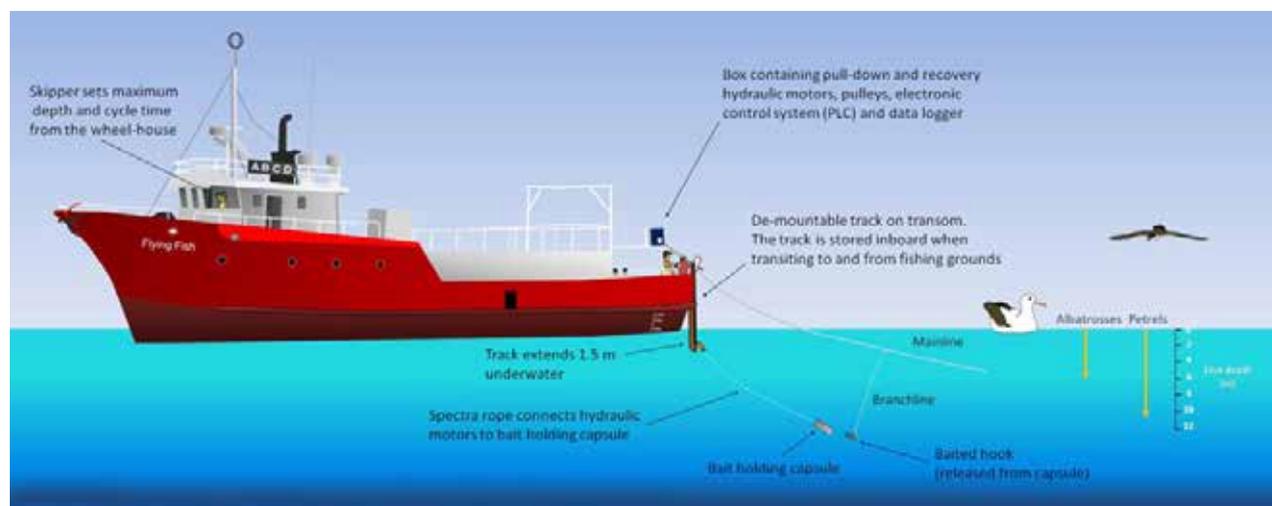
underwater close to the stern.

Adam Clow said the arm would be fitted either on or under the roof of the canopy cage and would be telescopically pulled out on rollers by crew and locked into place. The arm would drive the set line under water which would mean the bait would enter the water three to five metres behind the stern and push it to two metres under. This compares with a traditional set which sees the bait hitting the surface 15 to 20 metres behind the stern.

"This will virtually eliminate the opportunity for seabirds to dive on sighted bait hooks," he said.

FINZ fishery manager Brianna King said the Gear Innovation Pathway funding was still available, and encouraged all fishers to put up their brightest and best ideas to improve the fishery.

"We have really enjoyed seeing the different ideas that fishermen have come up with, and the creativity involved. The applicants I have spoken to are excited to have this pathway available. FINZ and SIL look forward to working together on this grass-roots initiative to make fishers' solutions a reality."



The underwater bait-setter. Picture; Skadia