THE OCEAN GUARDIAN

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HEADLINE

Small losses, big impacts–Small changes, big results

That's how Cam Speedy put it, talking about seabirds and fisheries at the recent conference of the New Zealand Federation of Commercial Fishermen.

A key problem with threatened marine species is that they need to breed more. They also tend to have long natural life-spans, long juvenile periods, and be quite picky about their mates. All in all, this means incidental deaths can become problematic, and much more quickly than something that breeds like the proverbial rabbit! … Small losses of adults can cause big population declines that take a long time to recover from. On the water, this means that bycatch risks must be managed all the time. But, managing bycatch risk isn't always complicated. This was the other part of Cam's message–small changes can lead to big results.

Deploying a tori line is one example of a small change. The tori line is probably the simplest, cheapest, and most effective device ever used for bycatch reduction. It was first applied in longline fisheries and it is now also used widely in trawl fisheries. While incredibly simple, it is extremely effective in reducing seabird captures in both trawl and longline fisheries. Key features of a good tori line include the following:

- Length: The tori line must be long enough to protect the danger areas where birds can be caught (trawl warps, or accessible longline hooks).
- Effective streamers: These need to be bright, and long enough to drop to the water surface.
- Enough streamers: Streamers must be close enough together on the tori line to block bird access to warps and hooks.
- Weight: At the end of the tori line, enough drag is needed to keep the line taut.

Of course, tori lines can be improved and refined, and probably will be forever (for example, recent work looked at shorter streamers). But the basics are very basic, and also very effective. Take a look at yours and make sure it's doing the job!

White-capped albatrosses at sea–one of the species that benefits from tori lines. *Photo: Department of Conservation/Ministry for Primary Industries.*

YOUR VOICE

In the rear view mirror

In May, the annual conference of the New Zealand Federation of Commercial Fishermen took place in Timaru. As anyone who's been to past conferences will know, this meeting always hosts good, robust discussion as well as a bit of entertainment. For those who couldn't be there, it's great to see the presentations online at: www.nzfishfed.co.nz/Category?Action=View&Category_id=14)

Protected species issues popped up in a number of presentations. James Turner (Fumunda Marine) talked about pingers as one possible tool for reducing dolphin bycatch.

And, Cam Speedy's talk for Southern Seabird Solutions was well summed up with his 'seabird SMART' message:

Safeguard seabirds

Mitigate risks

Avoid attracting seabirds

Report seabird captures

Treat (captured) seabirds with care

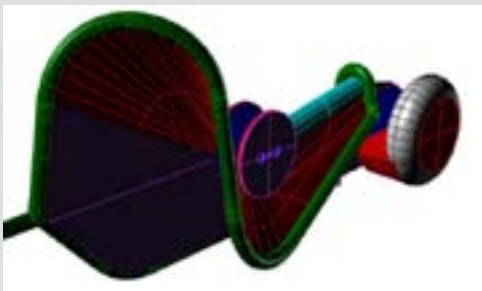
Pinger on a net. *Photo: www.fumunda.com*

WHAT'S UP?

Sub-surface setting for bottom longlines

Good things take time, or so we're told. One example is the Kellian underwater line-setter. The concept behind reducing seabird captures on bottom longlines is simple: get gear at fishing depth as fast as possible. The development of this device should help.

Dave Kellian and Dave Goad's past work on the line-setter has recently been taken further by Barry Baker (Latitude 42 Environmental Consultants). Barry is working with the two Daves and others to re-engineer and refine the prototype device and its operation. The team's goal: to have 10,000 hooks pass through the line-setter without a foul-up. Watch this space!



Schematic of the Kellian line-setter. Image and more information:

www.doc.govt.nz/upload/documents/conservation/marine-and-coastal/marine-conservation-services/MIT2011-04-inshore-bll-mitigation-device-presentation.pdf

WHO'S WHO?

Risky business: Part 2

Last month, Drs Ben Sharp and Martin Cryer, scientists from the Ministry for Primary Industries' (MPI) started telling us the scoop on MPI's seabird risk assessment. It's certainly caused some ripples out there, and it's important to know the real story. This month, we hear more from the nous behind the numbers …

But what if some fisheries only catch a few birds?

It doesn't matter to the birds which fishery or even which country they are caught in. What matters is the total number of deaths relative to the population's ability to sustain additional deaths.

Once a seabird species is identified as at risk, it's up to us to break the risk down to the fishery level and beyond, to help us understand and deal with the impacts. The issue might be seasonal, in a particular location, or on a particular type of gear or vessel. The main thing is that, once we know what the risks are, we can work to solve problems where they occur.

It's important for there to be a robust and evidential basis to working to solve these problems. Seabirds migrate all over the world, so really we need to have solutions that other countries can pick up and use, and good science helps with that.

What if there isn't much information being used to assess risk? Can the assessment be 'wrong'?

We always ask 'Where can this be wrong? What don't we know? What are the underlying assumptions? Does this make sense?' So, we don't blindly follow the assessment's outputs.

Already we've used a variety of methods to highlight results where the statistical outputs alone would otherwise lead us astray. Our 'bulldust filters' are always on.

How can this assessment be improved in the future?

For each seabird species, the assessment identifies which assumptions and parameters create the most uncertainty about current risk levels. We can use this information to target our efforts to improve the assessment where it matters most. For some species, better information on seabird distribution and fisheries capture rates will help. For others we need better population estimates or growth data.

Basically, any improvement in information quality makes for a more precise risk assessment, but some improvements are way bigger than others, and some cost way more than others. We can't afford to do everything, but the risk assessment helps us to be strategic and cost-effective in our choices.

And finally, how does this risk assessment stack up compared to others globally?

It's right up there! In science, things can always be improved. But this assessment is cutting edge, and it will keep getting better as we update it.

Thanks Martin and Ben! We see the seabird risk assessment report is online at: http://fs.fish.govt.nz/Page.aspx?pk=113&dk=22912

Some of the seabirds in question. *Photo: J Pierre*

WORLD WATCH

Global standards for local fisheries

The international demand for 'sustainable seafood' is increasing rapidly. But what's sustainable and what does that mean for our fisheries, and protected species, at home?

The Forest and Bird Best Fish Guide is a well known New Zealand example, but there are loads of others. And, mobile phone apps are available for when your pocket guide isn't (e.g. Seafood Watch, Safe Seafood, and FishPhone, all available on iTunes). Whatever you think about these guides, they are increasingly important in influencing consumer seafood choices. Further, in the US and UK for example, all the big names are onto sustainable seafood: Co-op, Marks & Spencer, Sainsbury's, Safeway, Walmart, and Whole Foods. But what does this mean for New Zealand fisheries? It may mean New Zealand- caught fish does not get on prime shelves overseas, even if we think it's from a sustainable fishery. There are a number of sustainability assessment schemes, of which the Marine Stewardship Council is probably the best known.

Seafood Watch® ratings of wild-caught fishery products. Image and more information: www.montereybayaquarium.org/cr/seafoodwatch.aspx

They all consider some combination of the same things: target stock status, non-target fish and invertebrate catch, discards, protected species, ecosystem impacts and fishery management systems.

For protected species, sustainability assessments don't automatically mean no captures in a fishery. Instead, captures must be deemed sustainable and so not contributing to the depletion of populations. Effective monitoring, mitigation, and management strategies help.

The New Zealand southern blue whiting fishery was recently certified by MSC. While the fishery passed, a condition was set regarding captures of New Zealand sea lions. Similarly, the New Zealand albacore troll fishery passed MSC assessment last year, subject to three conditions and three recommendations. Amongst other issues, protected species management in this fishery warranted improvement to better meet MSC standards. Collecting more information on protected species impacts was the first step.

There are more opinions about sustainability assessments than schemes themselves. But, whatever your view, passing such an assessment is a considerable credit to all involved in the fishery. And, we can be sure that such assessments are increasingly important in securing markets for New Zealand's fish overseas.

For more information: www.wholefoodsmarket.com; www.sainsburys.co.uk/fish; www.walmartstores.com/Sustainability/10607.aspx?p=9173; www.msc.org

WHAT THE FAQ?!

What other dolphins?

With so much attention focused on Maui's dolphin, it's timely to remember New Zealand's other dolphins. Did you know…

- 15 species of the dolphin family live in New Zealand waters.
- Common dolphins are skilful cooperative hunters that work together to round up schools of fish for a feeding frenzy.
- Bottlenose dolphins feed on their mothers' milk for 2–3 years after birth. Adult bottlenose dolphins can live for 40–50 years.
- Orca and pilot whales are actually members of the dolphin family.

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FEEDBACK

To submit feedback, questions for the Myth Busters section or ideas for topics of interest for this newsletter please email johannapierre@yahoo.com

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