

Share and share alike: New Zealand and South America's seabirds

Minimising seabird by-catch is an international undertaking. Shelly Farr-Biswell uncovers some serious cooperation.

One of the things that seabirds and fishermen seem to have in common is that they like to spend as little time on land as possible – the sea is their home, their natural habitat. The only time many seabirds can be found on terra firma is when they're breeding (no comment on fishermen!). And while New Zealand is known as the 'seabird capital' because of the large number of species that come here to breed, many of these ocean wanderers spend a lot of time in waters outside our EEZ.

From Australia to the USA to southern Africa, New Zealand's seabirds fly to some pretty far-flung destinations, including a large number that wing their way to South America to feast in its productive waters. "You breed them, we feed them," as Chilean scientist Carlos Moreno so succinctly said at the Southern Seabird Solutions Trust's review workshop last November.

Current thinking

One of South America's biggest draws for seabirds is the Humboldt Current which flows from the southern tip of Chile to northern Peru. New Zealand's Salvin's albatrosses, Chatham albatrosses, southern and northern royal albatrosses, Buller's albatrosses and Westland petrels are just some of the seabirds that come to the current which boasts the most productive marine ecosystem in the world. This productivity means the current is a big draw for fishermen too. While the current's system covers less than one percent of the world's ocean surface it contributes 15 to 20 percent of the world's marine catches.

"Because of the number of seabirds foraging in this particular area along with the intense fishing effort, the chance of seabirds being killed and injured by fishing activities is quite high," says Joanna Alfaro of the Peruvian-based non-government organisation Pro Delphinus.



Jeff Mangel of Pro Delphinus and fishermen on the Peruvian vessel *Jocel* show their catch – blue shark – and discuss marine by-catch issues and solutions. Photo courtesy Joanna Alfaro, Pro Delphinus.



Waved albatrosses tussle for a meal. Waved albatrosses are the only member of the albatross family to spend their entire lives in the tropics. During the non-breeding season they forage mainly off the coasts of Peru and Ecuador where they are at risk of being accidentally injured or killed in artisanal fisheries. Photo courtesy Jeffrey Mangel, Pro Delphinus.

While the Humboldt Current may be the world's most productive marine ecosystem, it isn't the only place in South America where New Zealand seabirds forage. For example, observer coverage in 2006 and 2007 confirms that New Zealand's southern royal albatrosses are being killed in the trawl fisheries on the Patagonian Shelf.

In other words, what happens in South America's waters this winter may determine how many seabirds make it back to New Zealand to breed next spring.

"If New Zealand seabird populations are in decline there will be increased pressure on the industry and government here to bring in regulations to try and address the issue," says Eric Barratt, Managing Director of Sanford. "In other words, we really are all in this together. If New Zealand seabirds are being killed, it's not only bad for the environment, it's bad for business."

Recognising the need for by-catch solutions on both sides of the International Date Line, Southern Seabird Solutions Trust has worked to connect South American and New Zealand fishermen through a number of exchanges. In fact, one of the Trust's first projects was a fisherman exchange with Sanford hosting Chilean swordfish skipper Luis Uribe Varas on board the *San Aotea II* so he could learn first-hand about by-catch mitigation techniques.

While these exchanges are useful for fishermen, a number of groups in South America have also called for the development of Spanish-language seabird educational materials so that basic messages can be taken to a wider audience. In response to this request, in 2008 Pro Delphinus and Southern Seabird Solutions Trust joined forces to develop a series of fact sheets that could be used in port communities throughout Pacific South America and



Northern and southern royal albatrosses are two species that travel from their breeding grounds in New Zealand to forage in South American waters. Photo courtesy Peter Moore.

Argentina. The international project is being funded by US-based Marine Conservation Action Fund, WWF-New Zealand and Encounter Kaikoura.

Joanna says, "We knew about the Trust's educational fact sheets and thought they could be adapted for the audiences we're trying to reach in Peru and other parts of South America."

Just the fact sheets

The result will be a series of general fact sheets that explore issues that are of importance across South America and also country-specific

facts sheets for Argentina, Chile, Peru, and Ecuador. Seabird experts from the four countries have agreed to help develop the country-specific fact sheets.

Joanna explains that, in Peru, Spanish-language environmental education materials are very limited, "Right now, when we go out to meet with fishermen we have nothing to give them, nothing that they can take away to consider later, nothing that they can share with their children. For us, the fact sheets will fill that void. We plan to use them to re-enforce messages around mitigation devices and general seabird ecology."

Already requests for the fact sheets have come in from Peru's Centro de Entrenamiento Pesquero de Paita (CEPP Paita, now part of FONDEPES), a training school for fishermen from different countries in Central and South America.

"Whatever the language, the message remains the same," says Janice Molloy, Convenor, Southern Seabird Solutions Trust. "Our seabirds are worth protecting and seabird-smart fishing needs to be practiced across the southern hemisphere."

The fact sheets will be completed in early 2009 and will be available both as a printed resource and for download from the Southern Seabird Solutions Trust and Pro Delphinus websites.

The Southern Seabird Solutions Trust is supported financially by the Department of Conservation, and the fishing industry through the New Zealand Seafood Industry Council and the Deepwater Group Ltd. The Trust is also supported by WWF-New Zealand.

www.southernseabirds.org
www.prodelphinus.org

Southern Seabird Solutions
An alliance of industry, government and environmental interests that work with fishermen to develop and promote fishing practices that are safer for seabirds.

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www.southernseabirds.org

Conservation through Cooperation



Southern Seabird Solutions



"The Southern Seabird Solutions partnership model has a lot going for it and could be used to solve other environmental issues. It relies on trust, development of a common goal, and a real willingness by all parties to listen to each other and accommodate each other's needs. Environmentalism is an evolution, not a war."

Eric Barratt, Managing Director, Sanford Ltd Seafood Industry Conference 2008



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Hands-on DVD for time-honoured skills

Net-mending, rope-splicing and gear technology are getting an innovative new training treatment via digital video. Debra Sturm finds out how.

In days gone by it would not have been imagined – fishermen on a deep sea vessel seated around a DVD player or video gaming console during their breaks. But digital technology is ever-present in these modern times and it now has an important role to play in some aspects of training for the New Zealand fishing fleet.

The Seafood ITO has just completed a new project to develop a DVD for training young fishermen in knot-tying, net-mending and rope-splicing. The comprehensive two-disc pack supports the Unit Standards covering these skills and has been developed with industry input. Filmed in Nelson last year and available from this month, the DVD is both a response to a training need and an example of the evolving requirements for training resources.

Shortage solution

Sharon Larsen from the Seafood ITO said skippers had noted a skills shortage in knot-tying and rope-splicing, and the issue had been brought to the Vessel Operations Advisory Group. "We were told there was a real shortage of people with some of these basic skills. Of course there are Unit Standards that cover them, but there are always issues around how you get these types of skills taught effectively and efficiently in a busy and diverse workforce," says Sharon.

"It is often difficult for trainees to attend training sessions because of the hours, seasonal nature, and geographical placement, of their work. We also need to be aware of some low levels of literacy in our workforce.

"A training resource like a DVD can help to break down some of these barriers to learning."

This is the first time a DVD has been developed specifically as a learning resource based on Unit Standards for the Vessel Operations group. But another DVD for skills relating to gear technology is also being filmed and should be available in a few weeks. (For more information see "Flume Tank Filming" this page).

"The use of a DVD in this way is cost-effective and user-friendly," says Sharon. "It's unlikely that the younger crews these days would pick up a written learning resource that is 20 or 30 pages long, but if they can look at a DVD they may be more interested and less nervous about the learning process."

Sharon says that on the bigger vessels there are usually DVD



players or video games in the mess. For those that want to learn in their spare time while on board they can easily have access to the DVD learning resource. "As part of an on-board structured learning programme they might watch the DVD then go out on deck and repeat what they have learned, with the bosun helping them. It's hands-on in the best way and since there is often ripped gear on a fishing trip, it's teaching a skill that is very useful."

Productive down time

Brodie Plum from Talley's vessel management says that tougher economic times for the fishing industry have meant a smaller pool of trained fishermen. "The more skilled people are not lining up for jobs in the industry like they used to. The fishing crews these days are of a younger demographic and need to be taught the necessary skills in ways they will respond to.

"Written material isn't necessarily something they relate to in this modern age of technology."

Brodie thinks Talley's vessels will find the DVDs extremely useful and appropriate for hands-on training. "Most of our training takes place on the deck when there is some down time. So in the middle of the night when it's freezing cold our guys can come inside instead to a nice warm mess and do their training in front of a DVD player. At the end of the day the more training we can provide during at-sea time the better, and this DVD makes it possible."

Sharon Larsen says trainees can always play the DVD at home, too, so learning opportunities are increased. The DVD is split into two separate discs, the first dealing with knot-tying, whippings, rope-splicing and rigging tackles. The second disc has all the net-mending content. The material is sorted into a main menu with subsections, for example, covering each of the particular knots, so crew can quickly find the knots they need to learn.

Nelson fishing school tutor Brian Fossett is the demonstrator on the DVD. He gives a brief to-camera introduction for each section, but for the rest all the viewer sees is a close-up of Brian's hands, demonstrating the various procedures. Brian has been teaching these subjects for many years and was more than happy to be involved in the project. With his teaching abilities already established it didn't take long for him to become comfortable in front of the camera.

Sharon has been thrilled with the work of the production company for this and the upcoming gear technology resource. Pure Productions in Auckland have produced all the material. Sharon describes Pure Production's company values as being in sync with those of the Seafood ITO. It is a company that believes in giving back to and being involved in the local community. "They are engaged in a number of programmes, including a relationship with the Wild Waitakere Warriors, which encourages young people to develop their leadership skills through outdoor activities like surfing and abseiling."

The DVD *Tying Knots & Net Mending* is available from SITO for free from this month. Anyone who wants a copy can contact Sharon Larsen by email or telephone. There is a possibility that the DVD will also be available in future for download from the SITO website.

Flume tank filming

The next Seafood ITO DVD training resource has been partly filmed in a somewhat surprising place – a flume tank in Denmark.

The new DVD is a learning resource about gear technology and is being produced with the help of Ulrik Hansen, a fishing gear scientist from the North Sea Centre Flume Tank Laboratory in Hirtshals, Denmark. The DVD looks at the general performance of a trawl and explains what happens to the net when it is changed or its towing conditions are altered. It also explains how different design features influence the performance of the net and recommends how the net should be maintained to remain efficient.

But as the DVD script helpfully points out, it is difficult to see how a net is actually performing during its operation, "hidden in the dark waters of our open seas." That is where the flume tank comes in. It works by circulating water around a test trawl net to replicate different towing conditions. The trawl can be viewed from the top of the tank, or from the side through huge windows.

In the DVD a flume tank is filmed under different conditions to get an overview of the different ways trawls can be operated. Filming has been carried out in the flume tank facility at Hirtshals.

Sharon Larsen at the Seafood ITO is hopeful that the *Basic Trawl Technology* DVD, including the flume tank footage, will be available for training purposes from mid-April.

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