



BYCATCH BYLINES

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HEADLINE

The future of New Zealand sea lions

New Zealand sea lions are once again in the spotlight, with the release of the Government's draft Threat Management Plan prepared by DOC and MPI. Stakeholder input is sought on the draft Plan, which covers management actions for the next 20 years. What's in the draft Plan and how can you have your say?

The Threat Management Plan's development kicked off in 2014. The development process included background work such as identifying and assessing the magnitude of all threats affecting New Zealand sea lion populations. This assessment found that the much-publicised decline in sea lion pup numbers on the Auckland Islands could not be linked to a single cause. Therefore, a multi-faceted approach to the conservation of this species is required.

The objective of the TMP is to 'promote the recovery and ensure the long-term viability of New Zealand sea lions'. Four goals support this objective. They are:

• Population:

Long term, by 2036, the overall population is above the 2015 estimate of 11,800 sea lions and is increasing.

Short term, by 2021 and every 5 years thereafter, the overall sea lion population is on track to achieving the 20-year goal.

• Partnership:

The Crown works in partnership with Ngāi Tahu on issues involving sea lions.

• Research and monitoring:

A structured research and monitoring programme is implemented

to inform and target management actions to achieve the objective of the TMP.

• Community:

Communities and stakeholders are involved and engaged in the conservation of sea lions.

These goals will be delivered through a range of activities, including population monitoring, facilitating pup survival, quantifying fishing impacts, research on disease, creation of a stakeholder forum to prioritise research and monitoring actions, and a national campaign to minimise human impacts where people and sea lions meet.

The consultation period on the Threat Management Plan closes on 5 August 2016. To have your say, follow the link in 'Want to know more?'



Consultation, New Zealand sea lion-style. Photo: Roger Montserrat Ribes (Creative Commons License: www.flickr.com/photos/ruchy/4542386085/).

WHAT'S UP?

Celebrating sustainable seafood

The New Zealand Seafood Industry Conference is at Te Papa in Wellington on 31 August. The focus is on sustainability and the 30th anniversary of the Quota Management System.

- The science of sustainability and market access are key focal areas for the day's sessions.
- Speakers include well-known personalities including Ray Hilborn, Pamela Mace, Rachel Taulelei and Graeme Sinclair.
- For more information: www.seafoodconference.org.nz



Fishing vessels at Island Bay, Wellington. Photo: © M.P. Pierre

WHAT THE FAQ?!

Does a grouper change its spots?

The spotted black grouper is one of our nine protected fish species. We all know leopards don't change their spots, but what about groupers?

- Spotted black groupers are found in south-eastern Australia and northern New Zealand. They generally live in water depths of up to 50 m.
- These groupers' sex lives are out there ... they start off as females and change into males at about 30 years old or over 100 cm long.



The spotted black grouper – a protected fish in New Zealand waters. Photo: www.daveharasti.com

- Spotted black groupers can grow to 200 cm in length and weigh 68 kg or more.
- They are territorial fish and are most active at night.
- Unlike leopards, spotted black groupers can change their spots, and rapidly. From the stripy pattern shown here, they can quickly become uniform greyish black or blotchy.

Weapons of mouse destruction

After four years of preparation, the Million Dollar Mouse campaign is underway. After three more years, 65,500 kg of bait, and \$3.9 million, mice on Antipodes Island may be a thing of the past.

Mice were introduced to Antipodes Island in the 1800s. Their introduction was accidental, and has caused damage to the Island's ecosystems and wildlife. The mouse population on Antipodes Island numbers an estimated 200,000 animals over the Island's 2,045 ha area. That's up to 150 mice per hectare! There are 21 species of seabirds that call Antipodes Island home. While mice might not seem a threat to such large birds, on islands overseas mice are known to eat nesting seabirds alive – that's both adults and young birds.

In 2012, the Million Dollar Mouse campaign kicked off with a bid to raise money to eradicate mice from Antipodes Island. The New Zealand public came to the party, along with DOC, the Morgan Foundation, WWF-NZ and Island Conservation. With the money secured, it was all systems go to rid the island sanctuary of this pesky immigrant. Detailed planning for the eradication operation started in earnest in 2014. With planning taken care of, the Million Dollar Mouse eradication campaign is now underway.



An Antipodean albatross chick – one of the seabirds calling Antipodes Island home.

Photo: <http://msuva29c0n033fsef2nvoed1.wpengine.netdna-cdn.com/files/2016/06/The-locals-watch-on...>
Antipodes-Wandering-Albatross.-J.-Zito.jpg

Thirteen people are the operational core of the MDM campaign. Essential support for these weapons of mouse destruction is provided by three ground crew, two helicopter pilots, a medic, and three helicopters. After a few weather-related delays, mouse bait had been dropped on 62% of the Island by 21 June. Bait is distributed from helicopters carrying

underslung bait buckets. Spreading bait is a precise business. GPS fixes of bait spreading locations are monitored throughout the operation to ensure the team gets bait into the home range of every mouse on the Island. Home ranges are estimated at areas of 40–60 m diameter. Two bait-spreading cycles are planned, distributing 16 kg and 8 kg bait per hectare, respectively. Why two drops? To make sure that no mouse is spared by the baiting operation. Another factor that should increase baiting success is conducting the operation in winter. This is because natural food supplies for mice are scarce and mice are also very unlikely to be breeding.

The Antipodes is a tough place to work. The weather is usually bad, there is no harbour, very few human comforts, and it is one of our most remote island sanctuaries, located about 760 km south-east of Dunedin. However, the benefits to wildlife of pest eradication have been shown from many other islands around New Zealand and are a critical part of conservation management here. The MDM team's efforts will be extremely well rewarded if Antipodes Island can be declared mouse-free in 2018 after three years of hard work. Critical to that declaration will be extensive monitoring carried out using detector dogs, tracking tunnels, traps, and 'chew tags' – like a cat scratching post that invites mice out to nibble, leaving giveaway tooth marks.

Follow the Million Dollar Mouse campaign online. It's even got a YouTube channel. Check the links in 'Want to know more?'

No-tori-ous and still one of the best

Decades after they were first used, tori lines are still one of the best ways to reduce seabird bycatch in longline fisheries. The law is clear – tori lines are required on every set made by bottom longliners over 7 m long and surface liners. But how can tori lines be made to work best, for fishers and seabirds?

Tori lines are a core component of the seabird mitigation tool box. They look basic, they are basic, and there is a set of simple ideas that makes them work best.

Light is right: A light backbone material and light streamers are kept in the air with less drag weight. So, the lighter your tori line is, the more aerial extent will be achieved.

Height: Deploying a tori line high keeps it above the fishing gear for a greater distance astern. This reduces the risk of tangles and makes the tori more effective. A pole will be needed to attach tori lines high enough on some vessels.

Weak link: Add a short loop of rope with lower breaking strain than the tori line backbone so you know where it will break in case of a tangle.

Drag: The hardest bit of tori line design is getting the drag right. Got sag? Need drag! If your tori line is sagging, add more drag by using a heavier object at the end of the tori line. Floats and cones can work well. Or, if you're worried about tangles, add a length of thick mono or rope at the end of the tori line. If it's still sagging, add more drag and think about how to reduce the weight of the tori or get it higher.



It won't often look like this out there, but this tori line shows many features of best practice designs. Photo: D. Goad

Backbone: A rope backbone with 30 kg breaking strain is a good start. That way, the tori line backbone will break before your mainline if there is a tangle.

Streamers: Light and bright is the way to go. Beauline International have some new tori material that is \$1.50/m and specifically designed for small vessel tori lines. It's light, bright, takes ages to fade, and will snap before your mainline does. That helps reduce issues if there is a tangle during setting. Streamers should run from the tori line backbone to the sea surface.

Want more information? Read the rules in *Want to know more?*

WANT TO KNOW MORE?

- **Headline:** Find out more about the Threat Management Plan: www.tinyurl.com/gwmpojo.
- **The Big Picture:** The Million Dollar Mouse campaign is at www.milliondollarmouse.org.nz or on video at www.tinyurl.com/j9hbzzy.
- **Best practice baselines:** Legal requirements for tori line usage are at <http://tinyurl.com/b5jja78> and <http://tinyurl.com/jg9ytw9>.

FEEDBACK

To submit feedback or questions, please email: jpecnz@gmail.com

Banner image: © M. P. Pierre