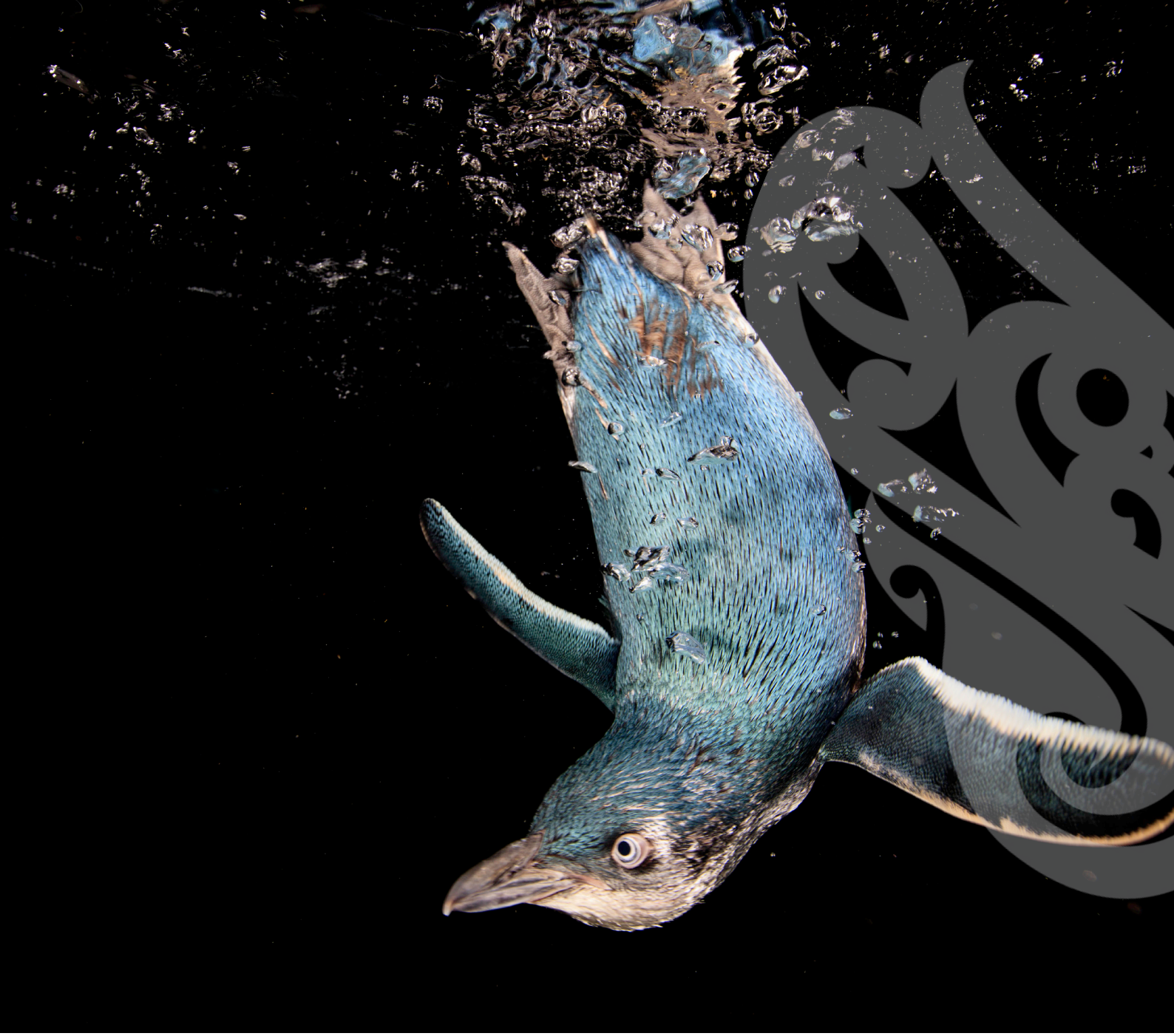


PATHWAY TO ZERO BYCATCH

zero BYCATCH

Forest & Bird
TE REO O TE TAIAO | *Giving Nature a Voice*

Executive summary

New Zealand is a global hotspot for marine life, with 92 indigenous seabird species, at least 52 marine mammal species, and a variety of protected sharks and corals.

Forest & Bird wants a new way of thinking about bycatch of endangered, threatened, and protected species based on the principle 'we only catch what we eat'. Forest & Bird is seeking major reductions in the deaths of and harm to our protected and threatened marine species. New Zealanders want our precious marine mammals, seabirds and sharks to thrive, but the country, industry, and regulators need to change a way of thinking which leads to thousands of unnecessary seabird deaths and hundreds of marine mammal deaths every year.

Actions to achieve a zero bycatch goal in the short term include:

- Setting zero bycatch goals and binding bycatch reduction targets for the National Plan of Action on Seabirds and the National Plan of Action on Sharks, and ensuring these outcomes are monitored and enforced.
- Modifying the surface longline rules for seabird bycatch mitigation to require all three main forms of mitigation, or hook pods, to be used.
- Setting a zero bycatch goal in the Threat Management Plan for Hector's and Māui dolphins along with measures to reduce human impacts on Hector's dolphins, particularly for small vulnerable populations, and as far as possible eliminate human threats to Māui dolphins.
- Driving cultural change and enabling collection of robust data through 100% observer coverage or cameras on all boats.
- Adopt an approach of managing vulnerable populations of protected species as well as species as a whole.
- Review the Marine Mammal Protection Act.
- Support wider implementation of the Motiti High Court decision (managing environmental impacts of fishing under the Resource Management Act).

In the medium term (looking beyond 2020):

- Amend the Marine Mammal Protection Act to make it more effective.
- Add a zero bycatch goal into the Fisheries Act and rewrite the information section to properly reflect the precautionary principle.

Changing how we think about protected, threatened, and endangered species

New Zealand is a global hotspot for marine mammals and seabirds. New Zealand has 92 indigenous seabird species and subspecies that breed on our shores, and at least 53 marine mammal species and subspecies. Around half the world's albatross and petrel species, and nearly half the world's whale and dolphin species, use New Zealand's waters. Thirteen of the world's 18 penguin species have been recorded in the New Zealand region, and nine of them breed here.

Birds

Of the 32 seabird and shorebird species and subspecies threatened with extinction, 12 are nationally critical, facing an extremely high risk of extinction, including species of albatross, shag, petrel, and penguin.

Mammals

Four marine mammals are Nationally Critical, facing an extremely high risk of extinction – Bryde's whale, Māui dolphin, orca, and southern elephant seal. One is Nationally Endangered, facing a high risk of extinction – bottlenose dolphin. Hector's dolphins and New Zealand sea lions are listed as Nationally Vulnerable.

Corals

The seas around New Zealand support a rich and diverse range of corals. Most are found in deeper waters and most are protected. Growth rates for corals can be as low as 1mm a year and corals live to be many hundreds of years old. Currently deep-sea corals are listed as Vulnerable Marine Ecosystems and it is illegal to deliberately collect or damage these species, yet commercial bottom trawlers are legally allowed to catch corals as long as they report it.

Sharks

Over 113 species of sharks use New Zealand waters, and several species of rays. Sharks play an important role in maintaining healthy ocean ecosystems, but we know very little about some of our own shark species. Some sharks and rays are protected, including basking shark, white pointer, oceanic whitetip shark, deep-water nurse shark, whale shark, manta ray and spine-tail devil ray. New Zealand's waters are also important to migratory sharks like Porbeagle, mako, and blue. Commercial fishers are legally allowed to kill protected sharks, as long as they report it.

A new approach

Forest & Bird wants a new way of thinking about bycatch of endangered, threatened, and protected species based on the principle 'we only catch what we can eat'. New Zealanders want our precious marine mammals, seabirds and sharks to thrive, so we need to change the way of thinking that leads to thousands of unnecessary seabird deaths and hundreds of marine mammal deaths every year. That is why we are calling for the clear, values-based, and guiding principle of zero bycatch.

The key components of effective bycatch management are:

- A clear vision and aspirational goal to drive continual improvement, innovation and efficiency.

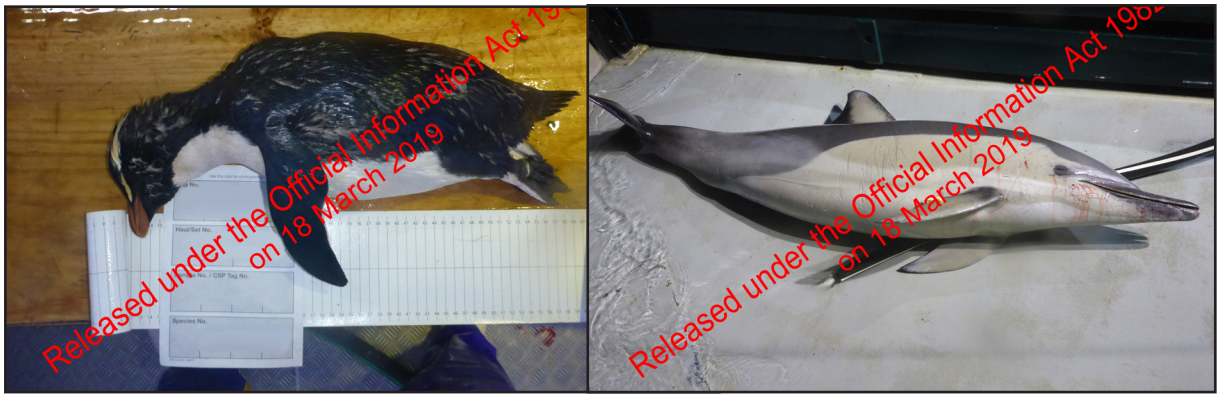
- A legislative and policy framework that sets out clearly defined management and conservation objectives, such as time-bound bycatch reduction objectives, and special provisions for highly endangered populations.
- A clear definition of when management action to reduce bycatch is required.
- Effective risk assessment and science processes in order to understand the size of the problem for different species and fisheries.
- Processes to ensure goals are achieved including data collection, monitoring, and enforcement.

Some countries are already adopting a zero bycatch goal. A zero bycatch goal is an aspirational management goal that has been adopted into legal fisheries management frameworks in the USA, EU, the UK, and signatories to ASCOBANS [Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas]. The US Marine Mammal Protection Act (1972) has a zero mortality rate goal and creates a trade measure to prevent imports of fish and fish products that do not meet US domestic performance standards for marine mammal bycatch. A goal stated in the Marine Mammal Protection Act (MMPA) is for 'incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate.'

This briefing paper outlines what a zero bycatch goal might look like in practice in New Zealand, including the policy and legislative programme needed over the next five years to make the goal a reality.

What is the problem?

Currently protected species bycatch is thought of as inevitable, regrettable, but tolerable if managed at the population level. Essentially, we are told that protected, threatened, or endangered wildlife has to die if we are to eat seafood.



However this approach has significant consequences:

- This approach is not working, even at a species level. At least 21 species of seabirds in trouble are directly impacted by fishing. Six species which are in very serious trouble (either Nationally Critical, Nationally Endangered, or Nationally Vulnerable) are directly threatened by fishing.
- New Zealand sea lions and Māui and Hector's dolphins are in serious trouble. Māui dolphin is almost extinct.
- The current regime is supported by legislation that gives fisheries an excuse to kill wildlife. The law presupposes that killing non-target species is inevitable. There is no penalty for killing protected species while fishing so long as it is reported. The Fisheries Act has a flawed 'precautionary principle' that puts fishing interests ahead of the environment.
- There is very little incentive for policy makers, decision makers and fishers to reduce bycatch. Instead the system's incentives are in favour of allowing a maximum number of individuals to be killed, short of causing extinction, in order to meet commercial imperatives. A contributing factor is that there is no prescription on when management action to reduce bycatch is required, and what action should be taken.
- The presently expiring National Plan of Action on Seabirds (NPOA-Seabirds) failed to reduce bycatch rates in nearly all fisheries. In some fisheries bycatch rates actually increased, for example in the surface longline and bottom longline fisheries. Poor Ministry for Primary Industries (MPI) processes and lack of accountability resulted in very slow progress on most objectives. Five-year fish plans were meant to be reviewed in the first year but this never happened.
- There is legislation to enable the setting of Fisheries Related Mortality Limits and population management plans to allow for the recovery of protected marine mammals (Marine Mammal Protection Act 1978), administered by the Department of Conservation (DOC). However this part of the law has never been applied, in part because of flawed wording that requires biologically unachievable targets. What has been used is the setting of a Fisheries Related Mortality Limit under the less conservation-focussed Fisheries Act 1996 for one species only.
- Substantial funding goes into developing and using complex mathematical models to determine how many animals can be legally killed without driving the population to extinction. This is funding that could be spent on instead on tackling and reducing the problem. This is encouraged by the wording of the information section of the Fisheries Act.

- New Zealand fisheries management relies on accurate monitoring and reporting. With limited numbers of observers and no cameras on inshore boats the system for managing bycatch relies on self-reporting by the industry. But industry self-reporting cannot be relied on, and the current system is failing.

This status quo is supported by outdated thinking. For example, the unreliability of compulsory self-reporting is so normalised that it is considered unremarkable that New Zealand spends millions every year to estimate numbers of bycatch, which the fishing industry is legally obliged to report but which often isn't reported.

New Zealand fishers are not required to use world standard best practices. For example, in the surface longline fishery, world best practice recommends the use of three practices; only setting at night, using bird scaring devices, and line weights. An alternative to these three methods is the use of hook pods to avoid catching seabirds. Currently New Zealand is considering allowing day setting with line weights and bird scaring devices, or using a hook pod. We know the 'three out of three' method works, and New Zealand's two out of three practice will continue to put sea birds at greater risk.

For seabirds, the problem is in many cases fishers don't want to use the mitigation methods that should be used. In the set net fishery there are no known ways of avoiding catching seabirds.

For marine mammals, sharks, and corals, too often fishers want to continue to use indiscriminate methods of fishing, like bottom trawling and set netting, or fish in areas which overlap with areas significant to those species, such as the foraging grounds of the New Zealand sea lion targeted by the Auckland Island squid trawl fishery.

There is a lack of incentive to reduce bycatch. There is no clear policy about what the acceptable level of impact is, and no prescribed actions if this is exceeded.

Seabird case study: hook pods

A new proven method to significantly reduce bycatch of seabirds is the 'hook pod' - a polycarbonate capsule designed to cover the hook and barb to prevent albatrosses and petrels from getting hooked. It releases after 10 minutes immersion or 10m depth. This has been adopted as a stand-alone method by the Western Central Pacific Tuna Commission and is currently being consulted on in New Zealand.

International trends

New Zealand's current bycatch management is placing New Zealand at odds with international trends. There is increasing international scrutiny of bycatch of marine mammals and other protected species. This can be seen in recent initiatives in global resource management forums, including the development of a new bycatch mitigation initiative at the International Whaling Commission, adoption of new resolutions on Monitoring and Mitigation of Small Cetacean Bycatch by ASCOBANS, development of an EU Action Plan on Cetacean Bycatch, and the new USA fish import regulations.

The USA model

In 2004, the USA adopted a Zero Mortality Rate Goal (ZMRG) into the Marine Mammal Protection Act (1972). The ZMRG is a reflection of societal values and the principle that no bycatch of endangered marine mammals should be considered acceptable, and that actions should be taken to continually reduce human caused mortality of marine mammals towards zero.

The Zero Mortality Rate Goal has provided a clear focus for the development of bycatch management policy in the form of Take Reduction Plans. In this way, the goal of reducing bycatch to zero has made a profound difference for some marine mammal stocks. Take Reduction Plans are the main mechanism for implementing the ZMRG and where successful generally include objective, measurable criteria for reducing bycatch over time, along with regulations that are readily monitored and enforced. Take Reduction Plans have been useful to drive bycatch reduction, technological innovation, and improvement in fishing methods. A well-known example of this is the reduction of dolphin bycatch in the eastern tropical Pacific (ETP) purse seine fishery for tuna.

Fishers taking the initiative

Some in the New Zealand fishing industry are taking the initiative:

- **Black Petrel Working Group**
  This collaborative stakeholder working group was set up specifically to tackle bycatch of black petrel, the New Zealand seabird species most at risk from commercial fisheries. In 2014 Forest & Bird, WWF-NZ, Southern Seabird Solutions, iwi, fishing companies (Leigh Fisheries, Moana NZ, Sanford), fishing associations, the Hauraki Gulf Forum, DOC and MPI all signed a pledge to work together to ensure black petrels thrive in the Gulf.

Despite agreed measures and performance, low observer coverage has meant we have been unable to verify improved performance, or reductions in bycatch of black petrel. As a result it was agreed to run camera trials voluntarily on these fishing vessels to compare the performance of observers vs cameras. Interim results suggest cameras are just as capable of detecting bycatch of seabirds and land-based reviewers are able to identify the seabirds.

- **Southern Sea Bird Solutions**
  This collaborative group involving industry, government and WWF has been operating since 2002. The Trust works to provide advice and support fishers to improve fishing practices to prevent seabird bycatch.

- **Sanford**
  Sanford operate one of New Zealand's largest inshore fishing fleets, and have publically stated their support for putting cameras on fishing boats.

The Zero Bycatch Goal Pledge

An aspirational goal is one that sets a clear intention, and communicates shared values and ambition. A recent example in New Zealand is the Predator Free 2050 goal, providing a fundamental platform for the work to protect threatened terrestrial species from introduced predators. Others include the Zero Waste goal, Smokefree 2025 and the health and safety goal of Zero Harm.

Just as the Predator Free 2050 aspirational goal has been useful in the development of policy and strategy for conservation of biodiversity on land, a zero bycatch goal would provide clear ambition and intent for our marine protected species affected by fisheries.

But accidents happen

Accidents will always happen. Even fishers using the best possible techniques will sometimes catch protected wildlife. Right now there is very little incentive beyond bad publicity to reduce bycatch. There is a presumption in public policy that large numbers of protected wildlife will be killed in fisheries and these deaths are an inevitable consequence of commercial fishing methods.

Steps to Zero Bycatch

Achieving a zero bycatch goal in practice has three main steps:

- Short term steps within existing laws and regulations to make better decisions within the constraints of the current system.
- Medium term changes to law to create a better framework for minimising bycatch, including changes to the Fisheries Act 1993 and the Marine Mammals Protection Act 1978.
- A better system of monitoring and verification to track progress in reducing bycatch, including mitigation practices.

The remainder of the briefing outlines these steps.

Key short term steps towards Zero Bycatch

Currently, fisheries bycatch is managed primarily through the Five Year Fisheries Management Plans, the Annual Operational Plans, non-statutory Threat Management Plans, National Plans of Actions and Fishery Operational Plans. However there are no clear and consistent goals to drive bycatch reductions in these plans. In the case of the NPOA-Seabirds, the goals set out in the plan have not been translated into objectives and targets in Fisheries Management Plans, despite that being a specific requirement of the National Plan of Action.

1. Adopt a goal of zero bycatch across all fisheries management plans

All Five Year Fisheries Management Plans, Annual Operational Plans, Threat Management Plans, National Plans of Action, and Fishery Operational Plans should adopt a goal of zero bycatch as they come up for review or are initiated.

In some cases the regulatory tools to achieve negligible bycatch by regulation alone may not be in place, so these plans should establish the shortest pathway achievable under current laws. This may require setting intermediate goals or targets that are achievable within the period of the relevant plan, within the constraints of current law.

All plans should have a clear system of monitoring and verification to enable progress to be publicly reported at least annually.

2. Better science and stakeholder engagement

MPI's current review of potential conflicts of interest in science provision for fisheries management is a welcome step forward. Science-based decisions for bycatch reduction need to make greater use of fully independent scientists who are not tied to the fishing industry, or agencies that depend on fishing industry funding. Better relationships with public interest stakeholders will help keep processes honest and help drive the shift in thinking that is needed.

3. National Plan of Action for Zero Bycatch of Seabirds

The currently expiring NPOA-Seabirds has failed to reduce bycatch and was not even properly implemented, despite having a goal of negligible bycatch.
The new NPOA-Seabirds should:

- Adopt a goal of zero bycatch.
- Set trip limits for seabird bycatch, placing responsibility on the fisher to create an incentive to drive down bycatch rather than relying solely on generic regulations.
- Include a clear decision to use cameras for monitoring.
- Require compliance with compulsory mitigation methods, rather than voluntary compliance.
- Be based on global best practice.
- Publicly report annually on progress.

4. Define and protect local wildlife populations

Decision makers should take into account the connectivity of populations of endangered, threatened and protected species, ensuring local populations are managed to ensure no loss of connection between adjacent populations, or core areas. Without this, apparent progress nationally towards achieving zero bycatch for a species as a whole could mask local extinctions or fragmentation of the species so that connectivity between local populations is lost.

5. Strengthen management of Hector's and Māui dolphins

In New Zealand, the mechanism currently used to manage bycatch to Māui and Hector's dolphins is a non-statutory Threat Management Plan. Spatial, temporal, and gear restrictions can be set under the Fisheries Act as can a Fishing Related Mortality Limit. However, no law or policy in New Zealand sets out what the threshold levels of mortality should be set to, and what the mortality reduction goals should be if the threshold is breached. The Threat Management Plan currently under development should be treated as a transition to more robust Population Management Plans for marine mammals, and should:

- Adopt a goal of zero bycatch.
- Adopt a simple and effective framework for local level population management of Māui and Hector's dolphins that encourages working towards an ambition of zero bycatch.
- Clearly define when management action is required.
- Set clear management goals while enabling and incentivising innovation.
- Set significantly more robust population goals aimed at ensuring human impacts are reduced in line with a zero bycatch goal. Goals need to be set to allow for not just future loss of population, but rather to achieve recovery of those populations.
- Immediately remove as much human impact as fast as possible from Māui dolphins' entire habitat, including new precautionary additions based on the latest science.
- Reduce the impact of the indirect effects of fishing, oil, gas and minerals exploration, and run off from land (sedimentation, water-borne disease).
- Using the most precautionary habitat description for Māui dolphins.

6. National Plan of Action for protected, endangered, and threatened sharks

The National Plan of Action for Sharks 2013 is due to be reviewed later this year. The current Plan of Action does not have a zero bycatch goal for endangered, threatened and protected species. The new National Plan of Action for Sharks will need:

- A zero bycatch goal.
- A clear pathway for delivering reductions in bycatch.
- Enforcement to ensure reductions happen.
- Verification of progress.

7. Review implementation of the Marine Mammal Protection Act

The New Zealand Marine Mammal Protection Act 1978 is administered by the Department of Conservation. The Government can use population management plans and marine mammal sanctuaries to help achieve zero bycatch. However population management plans have never been used and marine mammal sanctuary implementation has been patchy.

The Government should review the Marine Mammal Protection Act to understand why population management plans under the Act have not been utilised, whether spatial protections under the Act could be used to greater effect, and what amendments to the Act may enable more effective protection of marine mammals, particularly from fishing related mortality.

8. National direction under the Resource Management Act

The Motiti High Court decision confirmed that environmental impacts of fishing can be addressed by the Resource Management Act provided it is not for a Fisheries Act purpose. This provides an opportunity for the Government to improve the environmental performance of New Zealand fisheries, including securing spatial protection of vulnerable populations of protected wildlife.

The Government should use national direction (national standards and national policy statements) under the Resource Management Act, in the light of the Motiti decision, to further reduce bycatch and to assist regional implementation of the Motiti decision.

9. Better monitoring, verification and enforcement

Better monitoring, verification (of both species and catches) and enforcement is key to the success of a zero bycatch goal because much of what happens at sea is presently invisible to decision makers and from a practical point of view, largely not policed.

One example of the consequences of the current uncertainty over tools available for monitoring, verification and enforcement is the uncertainty over the deployment of cameras on vessels and the impact of this on the design of the NPOA-Seabirds. The development of an effective NPOA-Seabirds is presently hampered as policy makers are unclear how to implement compliance and monitoring. The design of the plan is very different in either a high monitoring or low monitoring scenario. Improved monitoring and verification can be achieved by:

- Increase the use of human observers: Greater use of observers is a step that could be introduced immediately. Law, policy and systems are relatively well settled after decades of fisheries observers. Increasing observer coverage in the absence of cameras on vessels would also have benefits for reducing discarding and other poor fishing practices.
- Complete the roll out of digital monitoring including cameras on all vessels except hand gatherers. The successful introduction of electronic log books and GPRS position reporting is welcome but rolling out cameras is needed to ensure accurate reporting and will have benefits beyond verification of bycatch. These benefits include the market price benefits of traceability of food and enforcement of rules to sustain fish stocks.
- Publishing readily accessible, timely, data on progress: Currently progress towards reducing bycatch cannot be readily tracked by the public unless they have a reasonable grasp of technical fisheries and public policy matters. Published data is also often not available for more than year after the data is gathered so that its salience is poor. New digital reporting technology currently being rolled out will allow MPI and DOC to publish regular near real-time reports to show how New Zealand is tracking towards success on a zero bycatch goal.
- Honest reporting: The fishing industry could take a lead by improving the quality of its reporting. In Australia, introducing cameras on boats resulted in three times the numbers of turtles being reported as caught, more than seven times the numbers of seabirds, and nearly eight times the number of marine mammals. The New Zealand fishing industry should get ahead of the curve and ensure that its members are accurately and honestly reporting bycatch.

Medium term steps

1. Review of the Fisheries Act

The Fisheries Act should be amended to better align it with international best practice. This should include a stronger phrasing of the precautionary principle which is presently ambiguously worded in section 10 of the Fisheries Act and ineffective for applying precaution in decisions on fisheries. Current wording in section 10 has been used to delay or diminish action under the Fisheries Act in a manner at odds with the purpose of the precautionary approach, which is to enable action for protection when impacts on the environment are still not fully known.

A zero bycatch goal should be written into the Fisheries Act to drive a shift in decision making and create a stronger legal basis for delivering a zero bycatch goal through Fisheries Act regulations.

2. Population Management Plans for marine mammals

The Marine Mammal Protection Act 1978 allows the Minister of Conservation to use regulatory Population Management Plans (PMPs) that are more stringent than the current approach using Fishing Related Mortality Limits for affected species, with a time bound target to recover to non-threatened status. The current non-regulatory approach of Threat Management Plans is not sufficient to safeguard threatened populations of marine mammals. After the adoption of the Threat Management Plan for Hector's and Māui dolphin, the Government should move to replace Threat Management Plans with Population Management Plans within five years.

All other marine mammals with threatened status, where fishing contributes to that threat status, should gain Population Management Plans.

3. The Marine Mammal Protection Act

The Marine Mammal Protection Act should be amended to establish a zero bycatch goal. Rules setting maximum allowable fishing related mortality should explicitly link to the zero bycatch goal.

Barriers to the establishment of population management plans should be removed and population management plans should become obligatory for threatened species.

The Act should also consider human induced threats in the context of the cumulative impacts of all threats at the local population (stock) level. The current threat classification system has the unintended effect of promoting fragmentation of a species by managing the status only at a whole-species level. This means under current law, local populations may go extinct while the wider species is considered in good health, despite the loss of connectivity between populations.

Data deficient species should be assumed threatened, and legislation and subsequent policy should reflect this.

The best mechanism for reducing bycatch of marine mammals is by limiting the spatial overlap of threats with the range of the species. Where data is poor a precautionary approach must be used.

4. Review of the Wildlife Act

The Wildlife Act presently creates an offence when someone deliberately harms protected wildlife. It offers no protection in situations where harm to protected wildlife can be reasonably expected to occur but where there is technically no intent to harm. The Wildlife Act should be amended to also offer protection to wildlife in situations where harm can be reasonably expected to occur and should be avoided.