

DRAFT

Draft policy for addressing the fishing-related mortality of seabirds in New Zealand fisheries waters

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1 Introduction

1.1 Overview

New Zealand is an important breeding ground for at least eighty seabird species and has the greatest variety of albatross and petrels in the world.¹ However, as in other countries, fishing methods used in New Zealand waters are known to cause incidental mortality to a range of seabird species. These fishing methods include surface and bottom longlines, inshore and deepwater trawl and set netting. Fishing using these methods is recognised globally as a potential threat to the populations of a number of seabird species.

The Ministry of Fisheries and the Department of Conservation have developed this Seabird Policy as a whole-of-government process to guide and coordinate New Zealand's management of fishing-related seabird mortality. This approach enables government and stakeholders to respond to the latest information on the risk caused by fishing to seabird species and to design and implement appropriate management actions. This Seabird Policy builds on many years experience of government and stakeholders taking action to manage fishing interactions with seabirds in New Zealand.

1.2 Who is responsible for managing the fishing-related mortality of seabirds?

Fishing-related seabird mortality can only be successfully managed by all interested parties working together. This includes government agencies (the Ministry of Fisheries and the Department of Conservation), industry and non-governmental organisations. The full range of activities undertaken in New Zealand to manage the fishing-related mortality of seabirds can be found in the *Seabird Action Plan*, available at <http://www.fish.govt.nz/en-nz/Environmental/Seabirds.htm>. Figure 1 below summarises the roles and responsibilities of the various parties involved in managing fishing-related management of seabirds.

¹ For a range of information on New Zealand seabirds, visit: <http://www.doc.govt.nz/conservation/native-animals/birds/sea-and-shore-birds/>

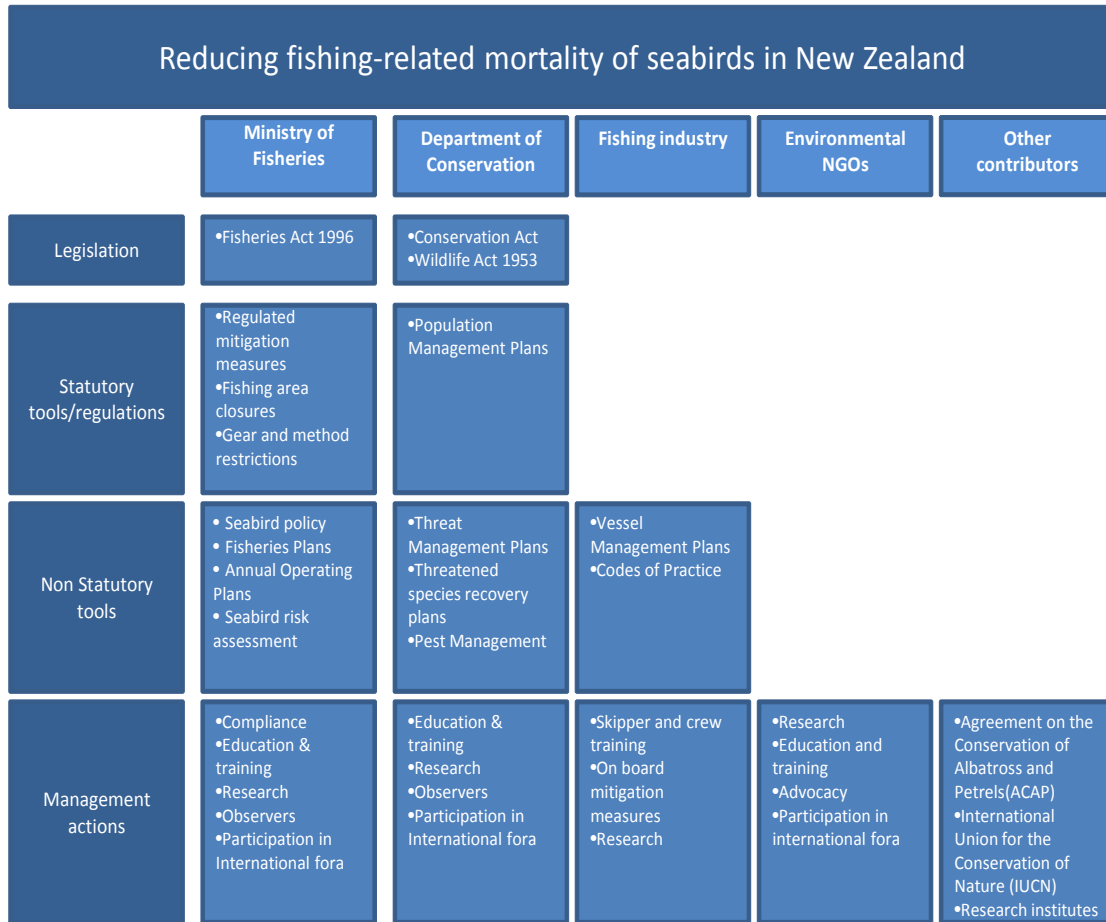


Figure 1 Organisations, roles and actions to reduce the fishing-related mortality of seabirds in New Zealand

1.2.1 The Ministry of Fisheries

Under the Fisheries Act 1996, the Ministry of Fisheries has a range of responsibilities to manage the fishing-related mortality of seabirds. These include the requirement that the adverse effects of fishing on the aquatic environment be avoided, remedied or mitigated; that associated and dependent species should be managed above a level that ensures their long-term viability and that the Minister of Fisheries may take such measures as he or she considers necessary to avoid, remedy or mitigate the effects of fishing-related mortality on any protected species.

To ensure these provisions are met, the Ministry of Fisheries takes a range of actions, including:

- Collecting information on interactions between seabirds and fishing gear
- Conducting research into the nature and extent of fishing-related mortality of seabirds and the effectiveness of mitigation methods
- Where necessary, establishing regulations requiring the use of seabird mitigation measures and enforcing these regulations through compliance activities²
- Working with fishers and commercial stakeholder organisations to encourage the use of best practice measures and strategies to minimise seabird interactions

² For more information on regulations pertaining to seabird mitigation measures, visit <http://www.fish.govt.nz/en-nz/Environmental/Seabirds.htm>

Recently, the Ministry has developed a seabird risk assessment to estimate the level of risk caused to New Zealand seabird populations by fishing-related mortality within New Zealand's Exclusive Economic Zone. This assessment considers all available quantitative information and expert knowledge about New Zealand seabirds and compares this to the known and estimated risk of fishing-related seabird mortality. The results of the risk assessment show which species are most at risk from fishing-related mortality. Detailed analysis in the assessment may then be used to help prioritise and target any required management actions to the highest-risk species and fisheries. More information on the Ministry's approach to managing the fishing-related mortality of seabirds is presented in the body of this policy, and in Appendix 1: Seabird Risk Assessment.

1.2.2 Department of Conservation

The Wildlife Act 1953 contains provisions for the protection of wild animals and birds in New Zealand. All but one New Zealand seabird species have absolute or partial protection under this Act. This means that it is an offence to hunt or kill these species, and that any accidental or incidental death or injury caused to these species by fishing activities is permissible only if reported.

As the agency responsible for administering the Wildlife Act 1953, the Department of Conservation undertakes a variety of actions to ensure the conservation of protected species of seabirds. One important action is the operation of the Marine Conservation Services Programme, which focuses on the impact of commercial fishing on protected species such as seabirds. Through this programme, the Department of Conservation commissions research and observer services to monitor the effects of commercial fishing on protected species, conduct populations studies and investigate methods for reducing incidental mortality. The Department of Conservation is also involved in the design and delivery of a broad range of education and training programmes, often partnering with industry and non-governmental organisations. The Department of Conservation may also implement Population Management Plans for any species of marine wildlife (see section 1.3.2 Wildlife Act 1953 below).

1.2.3 Industry

The New Zealand fishing industry seeks to reduce fishing-related mortality of seabirds in a number of ways. While commercial fishing vessels must comply with any applicable protected species regulations, some industry groups have adopted voluntary codes of practice which go further. For example, these codes may require an industry group's members to employ 'best practice' seabird mitigation measures and strategies, such as the use of multiple mitigation devices or offal management practices. Likewise, many individual fishers continuously innovate to find mitigation measures that work for their particular vessel configuration and the seabird species they interact with.

Industry groups such as the Deepwater Group and the Seafood Industry Council promote reductions to protected species mortality for a range of reasons, including to ensure exports of fish products meet the standards and expectations of international markets. To achieve these reductions, these groups sometimes commission and contribute funding to education and training programmes aimed at raising awareness of the risks of fishing-related mortality of protected species and how these risks can be mitigated. Similarly, industry levies fund a major proportion of the research and observer services commissioned by the Ministry of Fisheries and the Department of Conservation, including those services related to incidental seabird mortality.

1.2.4 Non-governmental Organisations

Several non-governmental organisations (NGOs) are actively involved in efforts aimed at reducing the fishing-related mortality of seabirds. Through advocacy and participation in training programs and research processes, NGOs contribute their time and expertise to developing effective methods for reducing incidental seabird by-catch. For example, the Southern Seabird Solutions Trust is an innovative alliance that includes representatives from the fishing industry, government, Maori organisations and environmental groups that supports and encourages New Zealand fishers to adopt seabird smart fishing practices. The Trust is engaged in a range of activities including education, training and partnership building.

1.2.5 Regional Fisheries Management Organisations

Regional Fisheries Management Organisations may establish policies for managing fishing related-mortality of seabirds, both on the high seas and within the zones of member countries including New Zealand. New Zealand has an obligation to ensure its domestic management is consistent with relevant conservation and management measures adopted by regional fisheries management organisations. These organisations also commission research into seabird populations and mitigation measures which may be relevant to New Zealand's management of fishing-related seabird mortality.

New Zealand has played an active role in establishing seabird mitigation measures in a number of regional and species-specific fisheries management fora. These include:

- Western and Central Pacific Fisheries Commission
- Commission for the Conservation of Antarctic Marine Living Resources
- South Pacific Regional Fisheries Management Organisation
- Commission for the Conservation of Southern Bluefin Tuna – while this is a species-based forum without a specific Convention area, it has adopted a policy to comply with seabird mitigation measures of relevant RFMOs.

New Zealand also collaborates with other countries in seabird research in a number of ways. The Ministry of Fisheries is leading an ecological risk assessment for the Commission for the Conservation of Southern Bluefin Tuna (in collaboration with the Agreement on the Conservation of Albatrosses and Petrels (ACAP), see 1.3.3 for more information) and is involved in the Commission's Ecologically Related Species Working Group, as well as in the ecosystem and bycatch working group of the Western and Central Pacific Fisheries Commission.

1.3 Legislative requirements

There are two key pieces of legislation in New Zealand that deal with the impact of fishing activity on seabirds. These are the Fisheries Act 1996 and the Wildlife Act 1953. Together, these Acts provide the legal framework under which regulations and policies are established to reduce the impact of fishing activity on seabird species.

1.3.1 Fisheries Act 1996

The purpose of the Fisheries Act 1996 is to provide for the utilisation of fisheries resources while ensuring sustainability. 'Ensuring sustainability' is defined in the Act as maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations, and avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment, which includes

seabirds. Further impetus to manage the impact of fishing on seabirds is provided through section 9 of the Act, which requires decision makers, when achieving the purpose of the Act, to take into account the environmental principles in the Act, which include:

- associated or dependent species³ (which includes seabirds) should be maintained above a level that ensures their long-term viability
- biological diversity of the aquatic environment should be maintained.

Section 5 of the Fisheries Act requires that it be interpreted in a manner consistent with New Zealand's international obligations relating to fishing. It also requires all persons exercising or performing functions or duties under the Act to act in a manner consistent with these obligations. Relevant international obligations include those relating to the incidental catch of seabirds during fishing activity, such those set out in the International Plan of Action - Seabirds.

Where a population management plan is developed for any species of marine wildlife under the Wildlife Act 1953 and a maximum allowable limit for fishing related mortality is set (see below), s15(1) of the Fisheries Act requires that all reasonable steps be taken to ensure that this limit is not exceeded.

In the absence of a population management plan the Minister can take such measures as he or she considers are necessary to avoid, remedy or mitigate the effect of fishing-related mortality on any protected species, and such measures may include setting a limit on fishing-related mortality.

1.3.2 Wildlife Act 1953

The Wildlife Act 1953 affords absolute or partial protection to all but one seabird species.⁴ Section 63a of the Act makes it an offence to hunt or kill absolutely or partially protected seabirds.

The Act recognises that fishing activity can result in the death of protected seabirds by providing a specific defence under section 68b(4) if the person proves that death or injury was accidental or incidental, or that the death or injury took place as part of a fishing operation. In both instances, the defence is only available if the death or injury is reported. A further defence is provided under section 68ab(3) of the Act if the person proves that they did not intend to commit the offence and that they took all reasonable steps to avoid committing the offence.

The penalties available under the Wildlife Act include fines, and in some instances, terms of imprisonment. There is no authority or power to revoke or suspend a fishing permit under the Wildlife Act, which means that despite prosecution, fishers can continue to fish and potentially catch seabirds.

³ The Fisheries Act defines 'associated or dependent species' as any non-harvested species taken or otherwise affected by the taking of any harvested species.

⁴ Black-backed gull *Larus dominicanus* - not protected; brown skua *Catharacta antarctica lonnbergi*: on Chatham Islands only - partially protected; and grey-faced petrel (northern mutton bird) *Pterodroma macroptera*, sooty shearwater (mutton bird) *Puffinus griseus*, black shag *Phalacrocorax carbo novaehollandiae*, little shag *Phalacrocorax melanoleucus brevirostris* and pied shag *Phalacrocorax varius* - may be hunted or killed subject to Minister's notification.

The Wildlife Act provides for a population management plan to be developed for any species of marine wildlife. Population management plans may address a range of matters, including an assessment of the biology and status of the species, an assessment of any known fisheries interactions with the species and recommendations to the Minister of Fisheries on measures to mitigate the fishing-related mortality of the species. Population management plans may also set a maximum allowable level of fisheries-related mortality for protected species, including seabirds.

1.3.3 International obligations

New Zealand has a range of obligations under binding and non-binding international law relating to managing the effects of fishing-related mortality on seabirds. These include, but are not limited to:

- The United Nations Convention on the Law of the Sea (UNCLOS), which requires that States take into consideration the effects of fishing on associated or dependent species with a view to maintaining or restoring populations above levels at which their reproduction may become seriously threatened
- The FAO Code of Conduct, which includes requirements to assess whether a seabird problem exists and develop a National Plan of Action (NPOA) to reduce seabird incidental mortality
- The FAO Best Practice Technical Guidelines, which expand on the FAO code of conduct by setting out steps required for an effective by-catch management framework.
- The Agreement on the Conservation of Albatrosses and Petrels (ACAP), which requires that Parties achieve and maintain a favourable conservation status for a number of species of albatross and petrel

2 Overview of seabird policy

2.1 Purpose of this policy

This policy describes a structured, whole-of-government approach to the issue of fishing-related mortality of seabirds in New Zealand waters. It establishes a targeted and planned methodology for:

- reducing the fishing-related mortality of seabirds
- meeting New Zealand's legislative requirements and international commitments
- designing and implementing management actions to reduce the risk to the seabird species most at risk from fishing-related mortality and
- ensuring the coordination of these actions between government and stakeholders

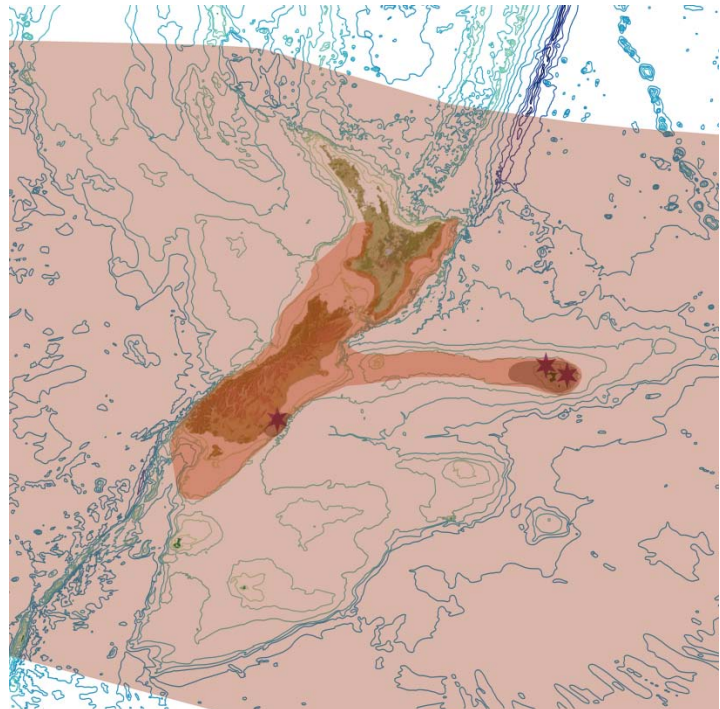


Figure 2: Annual distribution and relative density of the Northern Royal Albatross, with breeding colonies marked as stars.

This policy also establishes government's objective in relation to seabirds and describes how this objective will be achieved.

2.2 Scope of this policy

This seabird policy applies to fishing-related mortality of seabirds within New Zealand fishing waters (defined as New Zealand's territorial sea and exclusive economic zone). This policy will also contribute to meeting New Zealand's commitments under the International Plan of Action-Seabirds.

The following issues are not covered by this policy

- Fishing-related mortality of seabirds outside of New Zealand's fisheries waters – *this is covered by relevant regional fisheries management organisation (RFMO) or the Agreement on the Conservation of Albatross and Petrels (ACAP)*
- Non fishing-related mortality of seabirds, such as mammalian predation – *this is addressed separately by the Department of Conservation*

2.3 Policy objective and approach

The objective of this Seabird Policy is:

To reduce the fishing-related mortality of seabird species in New Zealand waters through the implementation of a risk-based approach.

In addition to the above objective the Seabird Policy uses a risk assessment which is based on the probability of a seabird species achieving a certain population objective. In this case the population objective is 'optimum sustainable population', a reference point ranging between 50-90% of a population's carrying capacity (see Appendix 1). This population objective meets and exceeds obligations under the Fisheries Act 1996 and UNCLOS. The long term aim of this Seabird Policy is that all New Zealand seabird species achieve this level.

To achieve this objective, this policy establishes a process that:

- provides for adaptive and flexible management of fishing interactions with seabirds
- recognises the complexity of the problem and the uncertainty in underlying information and
- links with other policies, processes and actions designed to reduce fishing-related seabird mortality.

The policy is premised on a risk-based approach to the management of fisheries-related mortality. This means fisheries managers and stakeholders design any necessary management actions to specifically *target* the seabird species *most at risk* from fishing-related mortality.

Future actions will be designed and implemented as knowledge improves and the effectiveness of existing actions becomes clearer over time.

This policy is intended to enable management of fishing-related seabird mortality that is:

- **Innovative** – to maximise stakeholder input and innovation into the design of any necessary management actions
- **Integrated** – to provide a clear structure for the achievement of Ministry objectives for seabirds through the existing fisheries management framework (primarily Fisheries Plans)
- **Informed** – to ensure management actions are based on the best available information, and that uncertainty in information is considered
- **Targeted** – to ensure management actions are designed to reduce risk to the seabird species most at risk from fishing-related mortality
- **Cost effective** – to ensure any necessary management actions are designed to reduce risk to seabird species at a fair cost to stakeholders, and
- **Iterative** – to ensure management of fishing-related seabird mortality is continuously refined to reflect the most up-to-date information and lessons learnt from earlier management actions (see figure 3 below).

The policy also recognises fisheries managers and stakeholders might be required to take prompt action in response to new information or sudden events which might significantly influence the risk scores of at-risk seabird species.

This policy does not set specific population/bycatch targets or prescribed mitigation measures to reduce fishing interactions with seabirds through this policy. This is because of the level of uncertainty about a) seabird populations; b) the nature and extent of fishing-related impacts; and c) the effectiveness of specific mitigation measures at reducing seabird mortality.

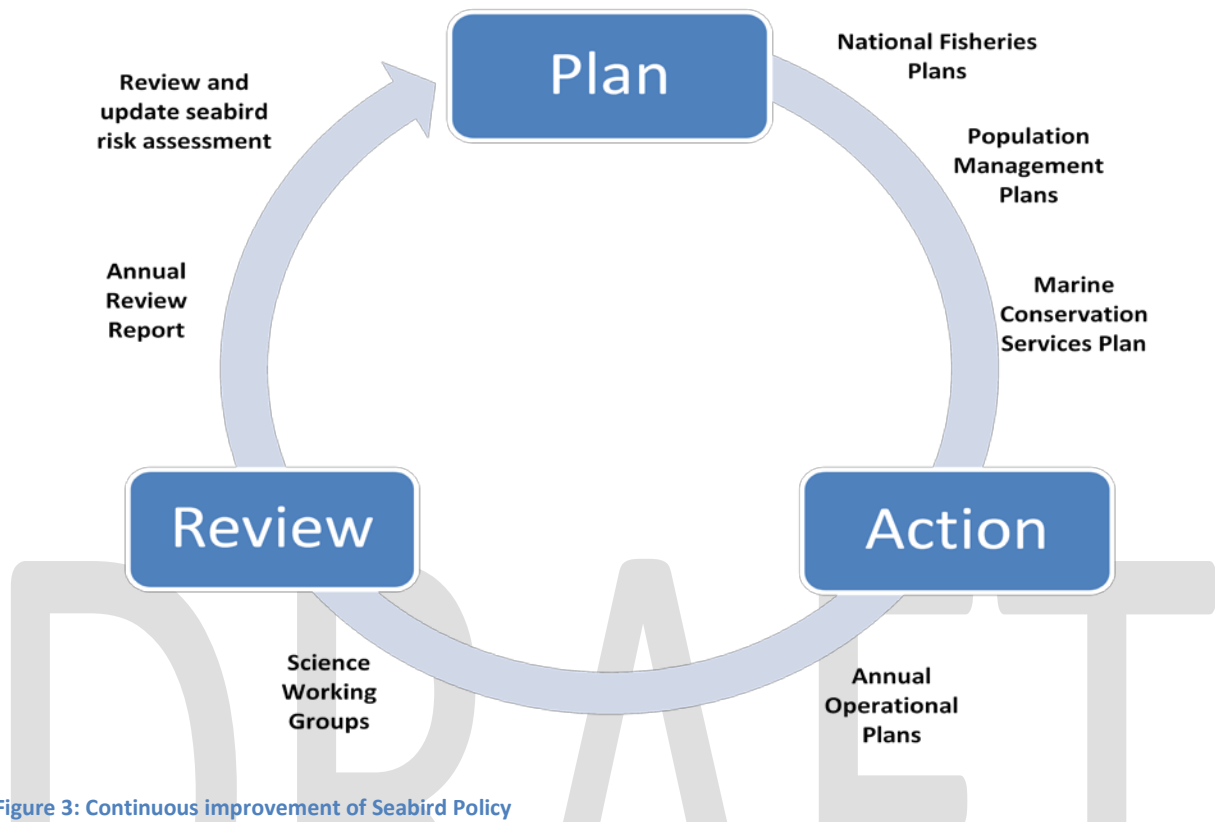


Figure 3: Continuous improvement of Seabird Policy

The development of this seabird policy builds on previous efforts by the Ministry of Fisheries and stakeholders to establish seabird-specific standards to guide management interventions. The Seabird Stakeholder Advisory Group (advisory group) was formed in 2008 to revise the Ministry’s “Proposals for managing fishing-related mortality of seabirds” (2007). The group comprised representatives of the Deepwater Group Ltd, SeaFIC, Forest & Bird, World Wildlife Fund, Birdlife International, the Department of Conservation and the Ministry of Fisheries. This policy incorporates aspects of the work completed by the advisory group, principally the use of a risk assessment methodology as the basis for prioritising management actions. Other recommendations reflected in this policy include the use of Fisheries Plans to address the fishing-related mortality of seabirds.

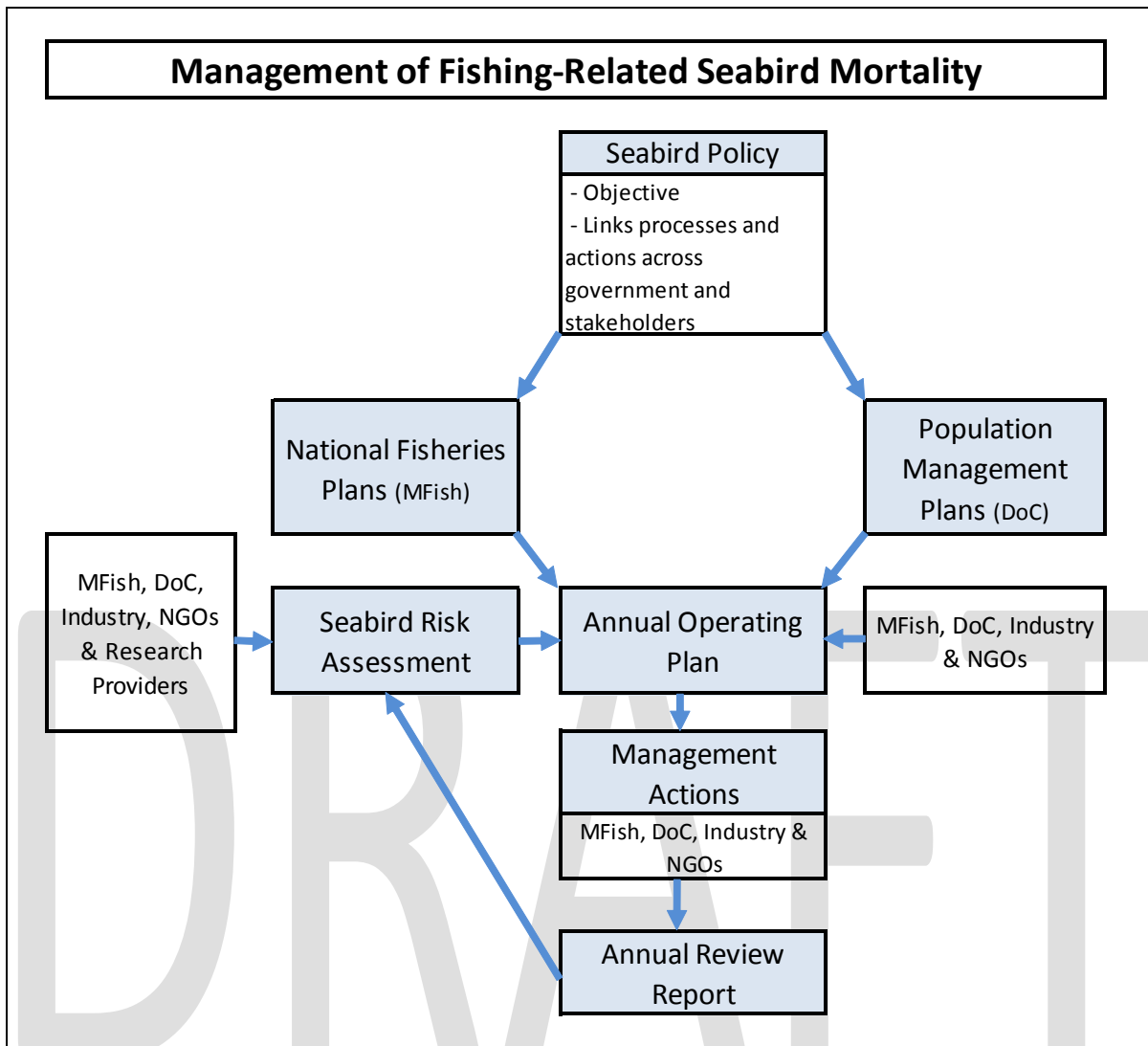


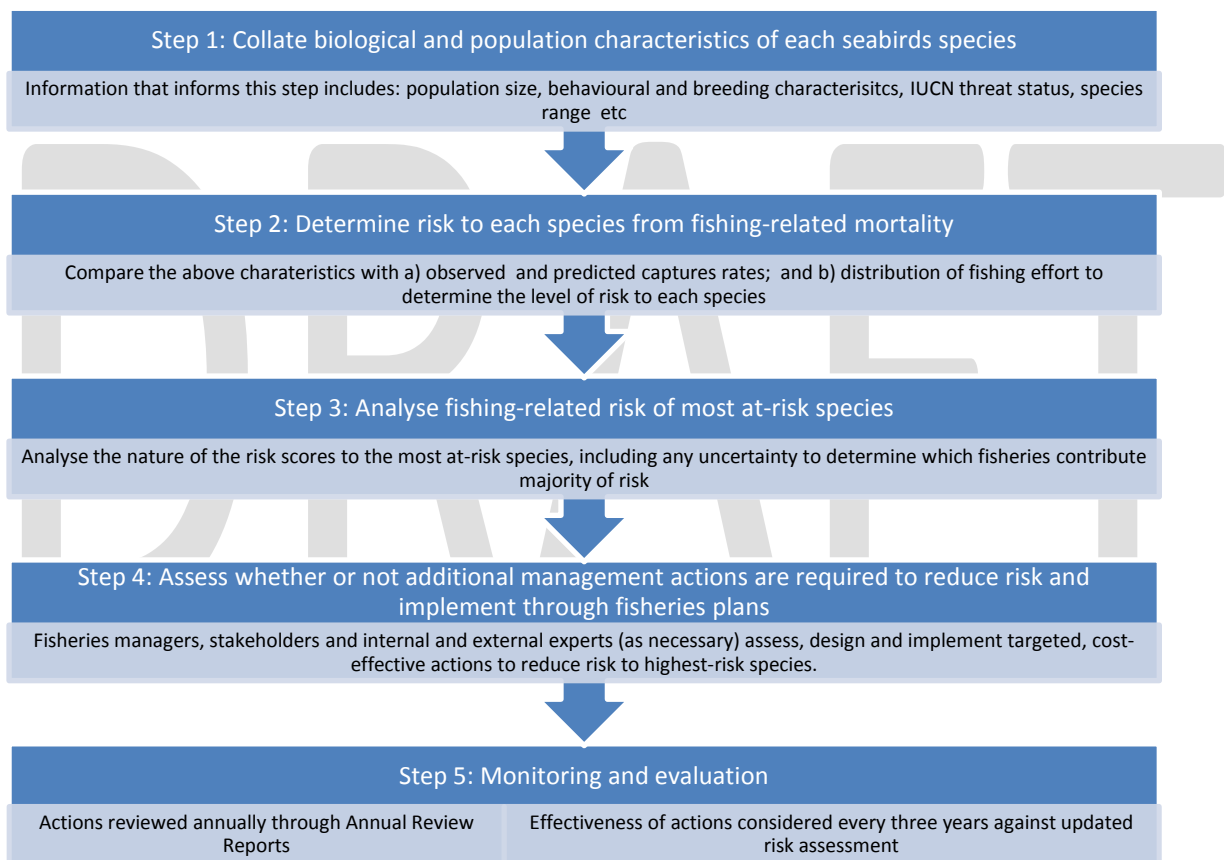
Figure 4: Context for managing the fishing-related mortality of seabirds

3 Policy steps

3.1 Summary of policy process

Government and stakeholders will reduce the risk of fishing-related mortality to seabirds by using the best available information (and expert judgement) on seabird populations and their interactions with fisheries to determine which species are most at risk. Appropriate management actions can then be designed and implemented through existing fisheries planning processes, and the Department of Conservation's research planning processes. This process is divided into a number of steps (summarised in Figure 5 and described in more detail below). Technical detail pertaining to Steps 1 and 2 is provided in Appendix 1.

Figure 5: Summary of steps in the seabird policy process



Step 1: Collate biological and population characteristics of each seabird species

In this step, available information and expert judgement on the biological, population and behavioural characteristics of the full range of New Zealand seabird species is collated, including:

- Population size and threat status (IUCN⁵ ranking) of seabird species
- Reproductive rates
- Natural survival rates
- Natural range

⁵ The International Union for the Conservation of Nature ranks bird species by threat level. See www.iucn.org

This information allows scientists to build an understanding the current status of each of the more than 80 seabird species that breed in New Zealand.

Process

Seabird population and biological data are collected through a range of research projects, many of which are funded through the Ministry of Fisheries and/or the Department of Conservation. Some of these projects are subsequently partially or fully cost-recovered from relevant quota owners. Local and international non-governmental organisations and independent research providers also complete research projects which contribute useful information at this stage. This information is then incorporated into the seabird risk assessment (see Step 2).

Timing

All available seabird population and biological data is incorporated into seabird risk assessment prior to its three-yearly update (next update currently scheduled for 2012-13). However, in some cases, it will be appropriate to review new data annually, as they might reveal issues that require prompt management action.

This policy is designed to ensure coordination between Ministry of Fisheries and Department of Conservation research planning processes.

Step 2: Identify fishing-related risk to seabirds

This step involves the comparison of biological and population data described in Step 1 with information about the *vulnerability* of seabirds to fishing-related mortality to estimate risk to seabird species. This information includes:

- Species type captured
- The number of individuals captured
- Geographic location of captures
- Fishing method associated with capture

More information on the risk assessment methodology is available in Appendix 1, Risk Assessment.

Process

When a seabird is captured by fishing gear and brought on board a vessel carrying an observer, the observer identifies the seabird and records this interaction (in some cases, identification occurs via formal necropsy). By comparing records of these captures with data from Step 1, or expert judgement where data are lacking, it is possible to determine the *vulnerability* of each seabird species to fishing-related mortality.

This produces a risk score for each species, and a list of all seabird species in New Zealand ranked by the risk caused by fishing-related mortality. This list allows government and stakeholders to see which species are most at risk from fishing activities (for more information on this process, see Appendix 1: Risk Assessment).

Timing

Observer data are collected throughout the year and collated annually. These data are critical for annual and triennial reviews of the effectiveness of any management action to reduce risk to seabird species (see Step 5).

Step 3: Analyse fishing-related risk of most at-risk species

The ranked list of seabird species described in Step 2 is the primary source of information used by the Ministry of Fisheries and stakeholders to determine: a) which seabird species require management actions to reduce risk and b) which fisheries/fishing method(s) generate risk to each species.

This list therefore provides an important starting point to guide action to reduce fishing-related risk to seabird species. However, as some of the information that informs the seabird risk assessment is uncertain, careful analysis of estimated risk and uncertainty is required before this information can be used to inform potential management actions.

Process

Once the seabird risk assessment methodology has produced a list of seabird species ranked by risk from fishing, the Ministry of Fisheries will convene a workshop for fisheries managers and other experts to analyse the risk score of the highest-ranked species. Questions to be addressed at this workshop will include:

- Is the risk score plausible given everything that is known about the species and its interactions with fishing activities?
- What component of the overall risk score derives from known risk and what component represents uncertainty in the underlying data?
- Which fisheries contribute the most risk to most at-risk seabird species?
- What are the sources of uncertainty in underlying data for each high risk species? (E.g., insufficient observer data, poor understanding of biological characteristics, uncertainty of population size etc)

Timing

A risk analysis workshop will be convened approximately every three years, in line with triennial re-runs of the seabird risk assessment.

Step 4: Assess whether or not additional management actions are required to reduce risk and implement through Fisheries Plans

Once the seabird species most at risk from fishing have been established, and the nature of the risk to these species is well-understood, it is necessary to consider what – if any – management measures are needed and likely to be effective. Designing specific management interventions will require a partnership approach with stakeholders to develop the most effective and efficient solutions. Management actions could include:

- Mitigation measures or practices (e.g., vessel management plans, streamer lines on trawlers)
- Education (e.g., workshops on best practice to avoid seabird interactions)
- Optimisation of observer coverage (e.g., increased observer coverage in areas of concern)

- Targeted compliance activities (e.g., port inspections to ensure vessels are carrying regulated mitigation measures For more information on compliance activities, see 'Description of Current Mitigation Measures' at <http://www.fish.govt.nz/en/nz/Environmental/Seabirds.htm>)
- Targeted research activities (e.g., to better understand cryptic mortality, information collection on biology and fishing interactions for species where such information is lacking)
- Trials of new mitigation measures or practices to determine their applicability to New Zealand fisheries
- Numerical limits on fishing-related seabird mortality.

Process

Management actions to reduce risk to seabird species will be discussed through Annual Operational Plans (see Figure 6). This will involve fisheries managers, stakeholders and any necessary experts considering the most appropriate management action to reduce risk to a seabird species/group of species, based on the magnitude and nature of risk caused by fishing.

Actions to reduce risk to seabirds identified through discussions between the Ministry of Fisheries and stakeholders will then be considered against other services required to support the Fisheries Plan (e.g., stock assessment research, marine mammal protection, compliance effort to support amateur fishing regulations) and prioritised accordingly. Similarly, any seabird research required to be performed by the Department of Conservation must be considered alongside other conservation services it is required to carry out.

Prioritised services then form part of a Fishery Plan's Annual Operational Plan and support the relevant objectives of the plan.

Factors to be considered when designing actions include:

- Any existing actions aimed at reducing risk to seabird species (and the effectiveness of these)
- The results of the risk analysis in Step 3 (e.g., what actions are appropriate given the nature of the risk to species in question)
- Cost effectiveness of actions (whether the *predicted* reduction to risk is in proportion to proposed expenditure)
- Whether the proposed action is expected to have complementary benefits to other species (e.g., streamer lines are likely to reduce many species' interactions with trawl warps)

Timing

When the re-run seabird risk assessment becomes available every third year, it will give the Ministry of Fisheries and stakeholders further information on which to consider whether existing management actions are effective and whether further actions are required. As in other years, any additional actions (or modifications to existing actions) will be implemented through Annual Operational Plans.

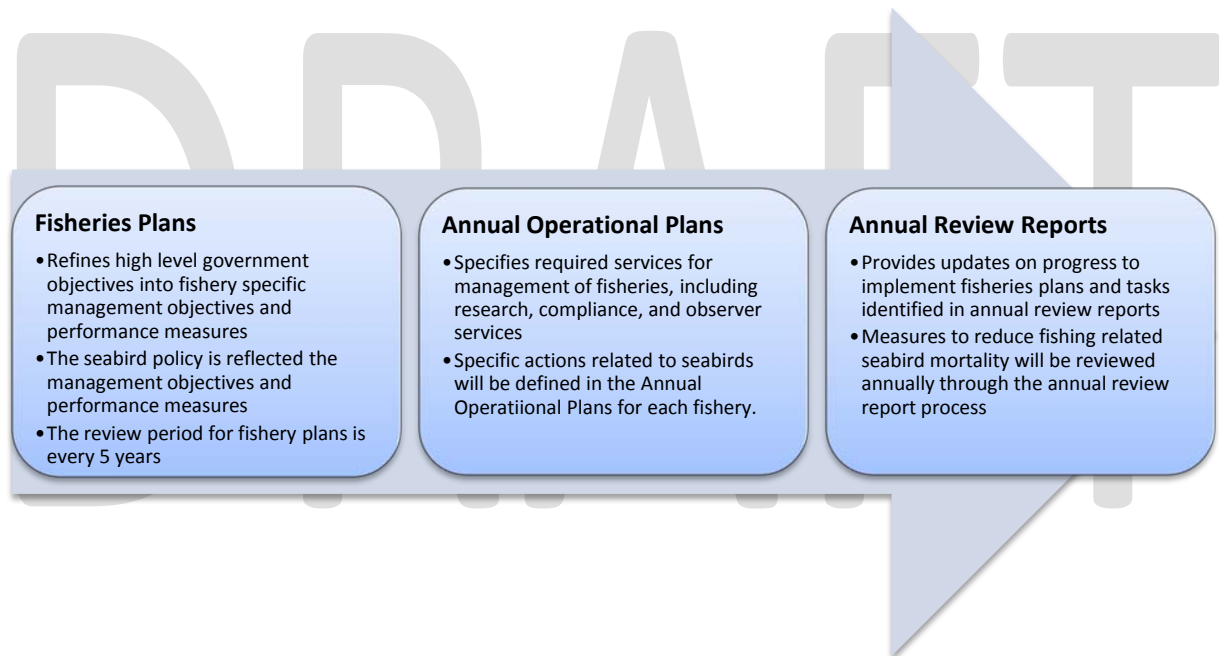
Step 5: Monitoring and evaluation

Monitoring and evaluation of management actions is a crucial component of an adaptive seabird policy as it allows the effectiveness of management actions already taken to be assessed and helps determine if further actions are required. This is especially important where there is uncertainty about the risk caused to seabird species from fishing and/or the appropriateness of actions to reduce risk.

Process

Each year, fisheries managers will produce an Annual Review Report which will track progress against the objectives, actions and evaluation criteria specified in the Annual Operational Plan, including those taken to reduce risk to seabird species. The Ministry of Fisheries will summarise management actions taken across all Fisheries Plans each year and produce an Annual Action Plan summarising existing actions and assessing their effectiveness. This will provide a useful record of existing actions to guide future decision-making on whether or not further actions are necessary.

Figure 6: overview of fisheries planning process



In addition, the effectiveness of actions will be compared against re-runs of the seabird risk assessment every three years in the risk analysis workshop (described in Step 3). This workshop will consider whether management actions to reduce risk are having a significant effect on the risk scores of priority seabird species and whether there are any confounding factors in the data. This will provide important information for government and stakeholders regarding the overall effectiveness of existing actions and whether or not further action is required.

Timing

Monitoring and evaluation of seabird management actions will occur both annually through Annual Review Reports and five-yearly through reviews of Fisheries Plans. These reviews will be informed in part by triennial updates of the Seabird Risk Assessment, and associated analyses.