

# Driving Seabird Conservation through International Cooperation

Asia Pacific Economic Cooperation – Oceans and Fisheries Working Group  
Non paper contribution  
New Zealand Department of Conservation  
February 2021

## 1. Executive Summary

Seabird populations are declining globally, including New Zealand's nationally critically endangered Antipodean Albatross, which is at risk of extinction. Fisheries bycatch is one of the greatest threats to these birds and given their highly migratory nature, international protection and cooperation is needed to effectively manage these threats.

As a component of New Zealand's host year for the Asia Pacific Economic Cooperation (APEC) forum, New Zealand seeks technical cooperation with APEC economies to promote greater awareness of seabird conservation and the threat of fisheries bycatch through a webinar series. The series will include sessions on mitigation measures, data collection, and economic drivers that may pose barriers to implementing mitigation measures.

New Zealand requests feedback from the Oceans and Fisheries Working Group (OFWG) on the proposed webinar series presented in this document.

## 2. Seabird Conservation

Seabirds are marine-adapted birds that spend most of their lives at sea. Many species of seabirds are highly migratory and only return to land to breed. Globally, there are 14 families of seabirds and 346 known species.

Seabirds are one of the most threatened group of birds globally with declining populations in almost half of all species<sup>1</sup>. Six of the eight countries with most near threatened or threatened seabird populations are APEC economies (Figure 1).

Bycatch from commercial fisheries has been identified as one of the leading and most pervasive threats to seabirds, second only to invasive alien species at nesting sites<sup>1,2</sup>.

---

<sup>1</sup> Birdlife International (2019a) Spotlight on Seabirds. <http://datazone.birdlife.org/sowb/spotseabirds>

<sup>2</sup> Dias, M. P., Martin, R., Pearman, E. J., Burfield, I. J., Small, C., Phillips, R. A., Yates, O., Lascelles, B., Borboroglu, P. G., & Croxall (2019) Threats to seabirds: A global assessment. *Biological Conservation* 237:525-537.

Bycatch in fisheries is particularly a concern for albatrosses and petrels, which spend most of their time at sea, and are slow to reproduce.

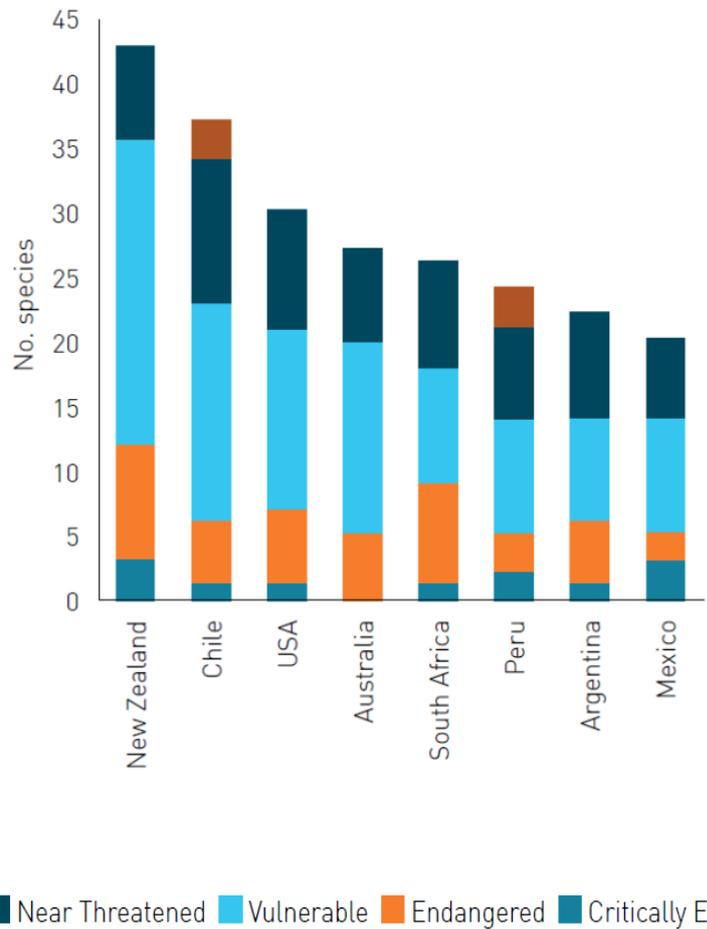
Many seabirds travel vast distances to feeding grounds and breeding areas. Their migratory pathways span the Pacific Ocean (demonstrated in Figure 2), exposing them to threats beyond the authority of a single jurisdiction.

International protection measures are critical for the protection of these birds. Reducing bycatch is an important component of sustainable fisheries management. A range of international agreements include provisions for seabird protection. A brief summary of the primary international agreements that include protection for seabirds is provided in Appendix I. For highly migratory and high seas fisheries, minimum requirements for measures to mitigate bycatch are set by Regional Fisheries Management Organisations.

## Significance to New Zealand

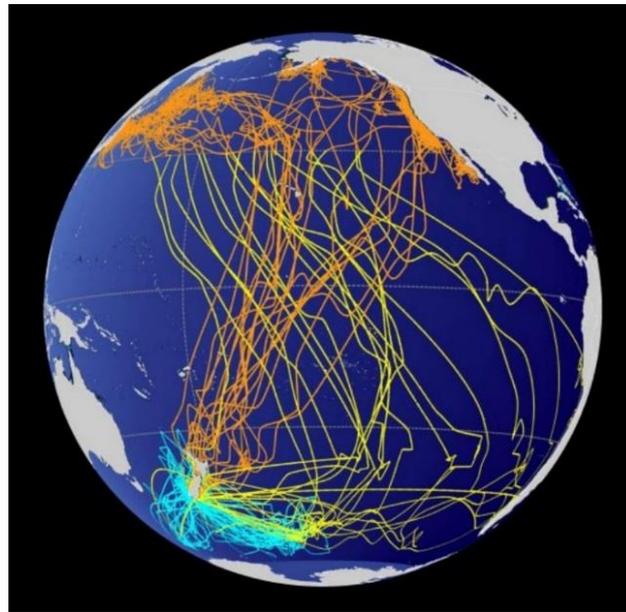
Of the 346 seabird species globally, approximately 145 seabird species occur in New Zealand and its waters. Ninety-five of these species breed in New Zealand, over one third of which do not breed anywhere else in the world. Seabirds hold a significant intrinsic value for New Zealand as it proudly embraces the title “seabird capital” of the world.

FIGURE 1. THE NUMBER OF BREEDING AND RESIDENT SEABIRD SPECIES CLASSIFIED AS NEAR-THREATENED OR THREATENED WITH EXTINCTION BY THE IUCN RED LIST OF THREATENED SPECIES<sup>3</sup>.



<sup>3</sup> Figure adapted from Croxall, J. P., Butchart, S. H. M., Lascelles, B. Satterfield, A. J., Sullivan, B, Symes, A., and Taylor, P., *et al* (2012) Seabird conservation status, threats and priority actions: a global assessment. *Bird Conservation International*. 22:1–34. <https://doi.org/10.1017/S0959270912000020>

FIGURE 2. TRACKING FROM A SINGLE SPECIES, SOOTY SHEARWATER, BREEDING IN NEW ZEALAND DEMONSTRATES THE INTER-CONNECTIVENESS SEABIRDS PROVIDE ACROSS THE ASIA-PACIFIC REGION.



### 3. Economic Drivers to Reduce Bycatch

There is growing awareness of the conservation issues faced by seabirds amongst consumers of wild caught fish. Consumers who choose sustainable and environmentally friendly products are an important economic driver to fisheries management that seeks to eliminate or minimise seabird bycatch. In response, fishery certification schemes have arisen providing enhanced market access to those that meet the required standards.

Such schemes include assessment of impacts on seabirds and other species vulnerable to interactions with fisheries. Fisheries that adopt robust seabird bycatch management measures will be better placed to meet current and future certification assessment criteria.

There is developing interest in exploring approaches where use of bycatch mitigation measures results in net economic benefits to fishers. APEC's economic focus makes this an area well suited to a collaborative approach between member economies.

An initial analysis of the economic drivers will be undertaken by New Zealand to inform APEC's OFWG discussions on its significance for the reduction of seabird bycatch. The outcomes of the analysis will be presented in one of the webinars described in section 6.

## 4. Case Study: Antipodean Albatross and International Cooperation

The Antipodean albatross (*Diomedea antipodensis antipodensis*) is one of the world's most threatened albatrosses. Their population has declined by more than 60% since 2005.

Among the declining seabird populations, the albatrosses have been identified as the most at risk. All but one of these far ranging and charismatic species are threatened or near threatened. Albatrosses are particularly affected by bycatch (90% of species), the single greatest threat to these birds. Many different fisheries pose bycatch risks to seabirds, but for albatross the primary focus has been on longline fisheries, in particular pelagic longline fisheries typically targeting tuna.

In New Zealand, the Antipodean albatross, or Toroa, is a flagship species for the need for seabird conservation. The population is declining at an alarming rate and is at risk of extinction. It is classified as Nationally Critical, New Zealand's highest threat class. This is of great concern to New Zealand where it is both endemic, and a taonga species – a species of special cultural significance and importance. The species has particular significance to Ngāi Tahu, the largest Māori (indigenous) iwi (tribe) of the southern region of New Zealand where the species breeds.

The northern Tasman Sea and waters to the north-east of New Zealand represent important fishing grounds for tuna that overlap with key foraging areas for Antipodean albatross. Bycatch in pelagic longline fisheries targeting tuna is believed to be their greatest threat. Fishing vessels posing bycatch risk in this area include those flagged to Chinese Taipei, Vanuatu, New Zealand, Spain, China, Japan and Australia<sup>4</sup>. Of these, Chinese Taipei, New Zealand, China, Japan and Australia are APEC economies.

In February 2020, Antipodean albatross was given additional international protection by being listed on Appendix 1 of the Convention for the Conservation of Migratory Species (CMS). This requires CMS Parties to strictly protect Antipodean albatross and is supported by an Action Plan which sets out conservation actions for range states, in particular in relation to fisheries bycatch in international waters. New Zealand led this initiative with the support of Australia and Chile. This collaborative process serves as an example of how like-minded countries can work together for a common conservation objective and commit to protect these animals from extinction through international cooperation.

An illustrated case study of the Antipodean albatross is presented in Appendix II.

---

<sup>4</sup> [Bose, S., Debski, I. 2020. Antipodean albatross spatial distribution and fisheries overlap 2019. Prepared by the Department of Conservation, 23 p.](#)

## 5. Seabird Bycatch and Mitigation Measures

Quantifying seabird bycatch at the global scale has been challenging due to limited data (e.g. limited deployment of scientific observers on vessels), differences between data collection protocols, difficulties in seabird identification and limited sharing of fine scale data (publicly reported data is typically at a very coarse scale such as 5x5 degrees).

In 2019, a series of global seabird bycatch assessment workshops, funded through the Food and Agriculture Organization of the United Nations (FAO) Common Oceans Tuna Project, provided the most comprehensive estimate of seabird bycatch to date in pelagic longline fisheries, at 30-40,000 seabirds per annum caught<sup>5</sup>. These levels of bycatch will continue to pose risk to seabirds such as albatross. While the workshops faced many typical challenges around available data, the format of the workshops encouraged collaboration between national scientists which facilitated appropriate data sharing between participants.

Though bycatch levels remain high and concerning for the conservation of seabirds, the development of mitigation solutions is well advanced. For over twenty years scientists and fishers have worked to identify and refine ways of avoiding or reducing bycatch, and this research field remains active. The Agreement on the Conservation of Albatrosses and Petrels (ACAP) plays an important role in regularly reviewing the latest bycatch mitigation developments to provide [best practice advice](#). A number of APEC economies are either Party to, or regularly observe, ACAP meetings. Key best practice mitigation options for pelagic longline fisheries are described in Appendix III.

## 6. APEC Economies Current Collaboration

In addition to the collaboration through Regional Fisheries Management Organisations (RFMOs), a number of collaborative initiatives between APEC economies to reduce seabird bycatch in fisheries have already been initiated. These early collaborations encompass a range of mechanisms, from inter-governmental arrangements, to sharing expertise between researchers. Recent examples include:

- Arrangement between the governments of Chile and New Zealand on cooperation in the field of seabird conservation
- Joint preparation by New Zealand, Chile and Australia on the proposal to list Antipodean albatross on CMS, and the associated plan for concerted action focussing on bycatch reduction
- Collaboration of researchers from New Zealand and Japan to develop a southern hemisphere seabird bycatch risk assessment, and development of bird scaring line designs

---

<sup>5</sup> Birdlife International (2019b). Report of the Final Global Seabird Bycatch Assessment Workshop. Scientific Committee Fifteenth Regular Session, Western Central Pacific Fisheries Commission. WCPFC-SC15-2019/EB-WP-07. Pohnpei, Federated States of Micronesia. 12-20 August 2019

- New Zealand, Australia, Chile, Peru, US and Canada engagement and actively working together through ACAP, with Japan and Chinese Taipei also observing recent technical meetings.
- The New Zealand and China Joint Communiqué on Cooperation to Promote Sustainable Fisheries Governance and to Combat Illegal Unregulated and Unreported Fishing (2017) under which New Zealand and China held a seabird bycatch mitigation measures workshop as a cooperation activity.

## 7. Opportunities for Further International Collaboration

APEC economies have the opportunity to provide global leadership on sustainable fisheries management practices and seabird conservation. International cooperation is critical to the conservation efforts to recover species such as the Antipodean albatross, that forage on the high seas and across multiple jurisdictions. This can be achieved through building on early collaborative initiatives between APEC economies. This may include new inter-governmental arrangements, working through other existing multilateral mechanisms, engagement between researchers or resource managers, promoting projects with industry or engaging with others with shared interests, and through information sharing.

In New Zealand's host year for APEC 2021, New Zealand intends to hold a series of webinars to facilitate the sharing of information and technical expertise on seabird bycatch. The topics for these webinars include:

- Seabird bycatch mitigation measures
- Data collection on seabird bycatch (including electronic monitoring and risk assessment)
- Evaluation of the economic drivers for the reduction of seabird bycatch

<b>Webinar Topic</b>	<b>Proposed Date (2021)</b>
1. Seabird bycatch mitigation measures	5 May
2. Data collection	16 June
3. Economic analysis	28 July

Options for future activities will be considered following the conclusion of the webinar series.

To complement New Zealand's information sharing initiative, additional example opportunities that may be considered include:

- share experiences on how economic benefits from reducing seabird bycatch can be maximised;
- link bycatch mitigation researchers and fisheries managers across APEC economies to support cross-fleet trials of mitigation options, to test their feasibility and improve their effectiveness;

- share outreach materials and case studies with fisheries managers to foster programmes to engage fishing vessel crews on bycatch reduction;
- link fishery observer and compliance monitoring data holders to review mechanisms and protocols for data collection and align reporting to allow robust bycatch reduction outcome monitoring;
- link fisheries data holders and researchers to conduct large scale bycatch assessments;
- encourage new bilateral or multi-lateral arrangements to cooperate on seabird conservation and bycatch reduction;
- coordinate between APEC economies in advancing improved bycatch measures, monitoring and compliance at RFMO's and other relevant fora, to demonstrate APEC's sustainability leadership; and
- share learnings in developing National Plans of Action to reduce bycatch and seek to align actions and reporting.

## 8. Concluding Remarks

With the world's seabird populations in decline and the Pacific as a seabird diversity "hot spot", it is vital that seabird conservation efforts are intensified, particularly in the Pacific. Though international obligations to mitigate seabird bycatch exist, bycatch continues to be a significant source of mortality for seabirds. Consumers are becoming increasingly aware of the significance of sustainably sourced food products and serve as a market driver for fisheries to emphasise their good management practises.

International cooperation is essential for the conservation of seabirds as they are highly migratory and maritime birds. As many of the seabirds that are at risk occur across the boundaries of many of the APEC economies, it is vital that the APEC economies prioritise seabird conservation through multi-jurisdictional initiatives.

New Zealand continues to advocate for seabird conservation through increased awareness and understanding of seabird bycatch mitigation measures and comprehensive reporting. New Zealand recognises that further international cooperation will be essential for the protection of these birds and will progress cooperative initiatives as host of APEC in 2021.

Over the course of 2021, APEC economies will be encouraged to consider seabird conservation through international cooperation as the exemplar of how countries can reverse the status of threatened species through meaningful collaboration.

New Zealand welcomes input from the OFWG on the proposed areas of cooperation and the webinar series, including the suitability of the suggested dates.

## Appendix I – Selected Summary of International Convention Protection for Seabirds

### UN Convention on the Law of the Sea

Under the United Nations (UN) Convention on the Law of the Sea, seabirds are included as one of the groups of species “associated with or dependent upon” harvested species, and subject to conservation requirements such as those laid out in Articles 61 (Conservation of the Living Resources) and 119 (Conservation of the Living Resources of the High Seas).

### FAO International Action Plan – Seabird Incidental Catch

The FAO has an International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries, and a number of APEC economies (New Zealand, Australia, Chinese Taipei, Japan, Canada, USA, Chile) have corresponding National Plans of Action setting commitments around seabird bycatch.

### Regional Fisheries Management Organisations

The tuna RFMOs, such as the Western and Central Pacific Fisheries Commission (WCPFC), and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) have seabird conservation measures in place, which have various spatial requirements for the use of seabird bycatch mitigation use.

### Agreement on the Conservation of Albatrosses and Petrels

A number of APEC economies are also member of ACAP (Australia, New Zealand, Chile, Peru with others attending as observers). ACAP includes an obligation to take measures, including those addressing fisheries bycatch, to achieve a favourable conservation status for albatross and petrel species.

### Convention on the Conservation of Migratory Species of Wild Animals

APEC economies are represented in the CMS (New Zealand, Australia, Chile, Peru), which is another multilateral agreement. The CMS provides for seabird conservation as migratory species and have recently listed Antipodean albatross on Appendix 1. This requires CMS Parties to strictly protect Antipodean albatross and is supported by an Action Plan which sets out conservation actions for range states, in particular in relation to fisheries bycatch in international waters.

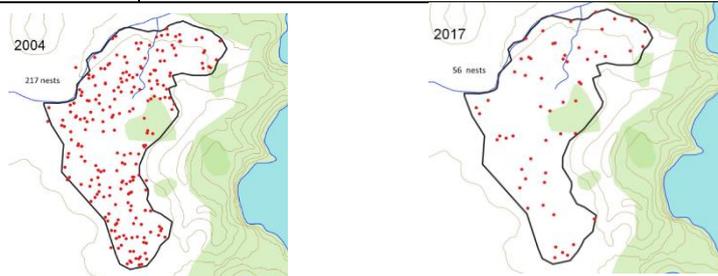
## Appendix II – New Zealand Antipodean Albatross Illustrated Case Study

### Antipodean albatross; a Nationally Critical taonga (treasured) species

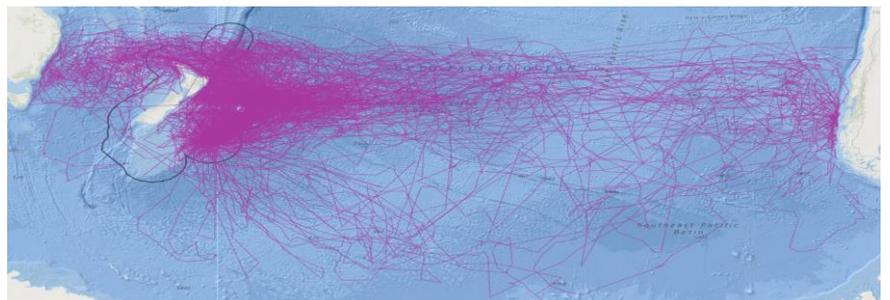
Antipodean albatross breed on the remote New Zealand subantarctic Antipodes Island. The population has declined by over 60% since 2005. This great albatross species does not begin nesting until they are typically 10-12 years or older, and only raise one chick every two years. The current rate of decline, if it continues, could lead to functional extinction of the species within the next 20-30 years. With the major breeding grounds being free of mammalian predators, the primary human threat to these birds is fisheries bycatch. The birds are particularly susceptible to being accidentally caught and killed on pelagic longlines. The birds forage widely across the Pacific, facing the risk of bycatch across jurisdictions, with greatest risk from pelagic longline fisheries operating on the high seas. [www.doc.govt.nz/nature/native-animals/birds/birds-a-az/albatrosses/antipodean-albatross/](http://www.doc.govt.nz/nature/native-animals/birds/birds-a-az/albatrosses/antipodean-albatross/)



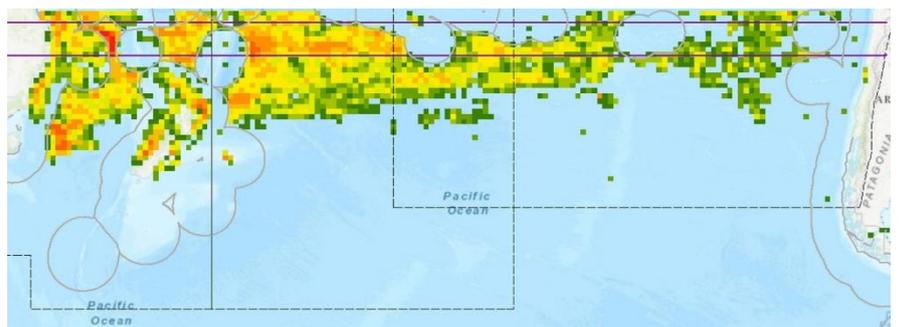
Location of nests (red dots) at the Antipodes Island study site illustrates the alarming decline in breeding birds. [Read the latest report on the population status.](#)



Antipodean albatross tracked during 2019 show the vast distances covered in their search for food. [www.doc.govt.nz/albatrosstracker](http://www.doc.govt.nz/albatrosstracker)



Pelagic longline fishing effort overlaps key foraging areas for Antipodean albatross, placing them at risk of bycatch. [Learn more on the overlap here.](#)



## Appendix III - Mitigation Measures in Pelagic Longline Fisheries

[ACAP best practice advice](#) consists of the simultaneous use of branch line weighting, night-setting and bird scaring lines, or the use of assessed hook-shielding devices. All these methods intend to reduce the chance that a seabird foraging for food is able take a baited hook, thus become caught on the line and often drowned as the line sinks.

### (i) Branch Line Weighting

Seabirds foraging across surface waters may try to take a baited hook, leading to bycatch. Branch line weighting acts to quickly sink baited hooks to a depth below the reach of seabirds.



[Explanatory video \(NZ\)](#)

[ACAP-Birdlife Factsheet](#)

(ii) Night-Setting

Most seabirds forage most actively by day, so setting hooks at night can help avoid bycatch. However, some species do forage actively at night, and during periods of full moon many other birds also become active.



[Explanatory video \(NZ\)](#)

[ACAP-Birdlife Factsheet](#)

(iii) Bird Scaring Lines

Bird-scaring line (or tori lines) act to form a physical barrier to birds above the longline during setting. To be effective, the bird-scaring line should be long enough to cover the line until baited hooks have sunk below the reach of seabirds.



[Explanatory video \(NZ\)](#)

[ACAP-Birdlife Factsheet](#)

#### (iv) Hook-Shielding Devices

This novel, standalone method physically protects the barb of the hook until it has sunk below the reach of seabirds. The attached pod also acts as a form of branch line weighting to sink the baited hook more quickly.

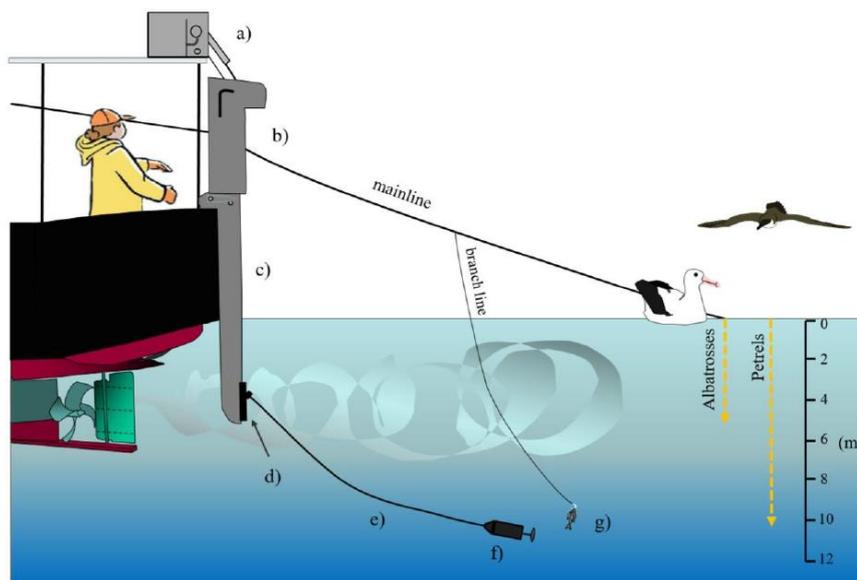


[Explanatory video \(NZ\)](#)

[ACAP-Birdlife Factsheet](#)

#### (v) Other devices under development

Research and Development into novel mitigation options remains an active field. One device currently undergoing final sea testing in New Zealand is the underwater bait setter. This device aims to reliably set baited hooks to prescribed depths up to 10m, beyond the reach of most seabirds



All the mitigation options discussed above target the elimination or reduction of seabird bycatch during the setting of longlines, when the majority of seabirds become caught on fishing gear. However, seabirds may also become caught while the gear is fishing (if it is within a few metres of the surface) and during hauling when hooks are again brought up to the surface. Devices such as bird curtains (hanging material that excludes entry of birds) around the hauling station are sometimes used to minimise this element of bycatch, but development of proven and widely transferable methods remains an area of ongoing investigation.