

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Joint Eleventh Meeting of the Seabird Bycatch Working Group and Seventh Meeting of the Population and Conservation Status Working Group <i>Edinburgh, United Kingdom, 18 May 2023</i></p> <p>Research and management actions for the Antipodes Island population of Antipodean Albatross <i>New Zealand, Australia, Chile</i></p>
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SUMMARY

AC 11 recognised the Antipodes Island population of Antipodean Albatross, *Diomedea antipodensis*, as an ACAP priority population for conservation management.

Since the reporting to PaCSWG6 there has been continued collaborative activity to implement a conservation plan for this priority population. This follows the listing of *D. antipodensis* in Appendix I of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in 2020, as proposed by New Zealand, Australia and Chile. The objective of the listing included to increase cooperation between Range States, RFMOs, ACAP, non-governmental organisations and other concerned parties to improve the uptake and effectiveness of bycatch mitigation use, including compliance monitoring and bycatch data collection, and to reduce the capture of Antipodean Albatross (and other seabird species) in longline fisheries. As part of the CMS listing process, New Zealand, Australia and Chile developed a CMS plan on Concerted Action for the Antipodean Albatross, which includes a full suite of actions to be taken by the CMS Party Range States and CMS Parties that are Members of, or engage with, key RFMOs.

This paper provides the second update of the implementation of the CMS plan on Concerted Action for the Antipodean Albatross. Progress has been made towards the review of seabird bycatch measures in various relevant RFMOs and we provide further updates on the research and monitoring on the Antipodes Island population.

1. BACKGROUND

The Antipodes Islands population of Antipodean Albatross, *Diomedea antipodensis*, was recognised as an ACAP priority population for conservation management at AC10 following the assessment made by Walker & Elliott reported in [PaCSWG4 Doc 03](#). Due to the lack of land-based threats to this population, it was identified that the major human-induced threat was bycatch in fisheries. The foraging range of this population extends from the east coast of Australia to the coast of Chile.

Under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), New Zealand, Australia and Chile developed a [Proposal for the inclusion of the Antipodean Albatross in Appendix I of the Convention](#) (at species level *D. antipodensis*, including *D. a. gibsoni* as well as *D. a. antipodensis*, the subspecies breeding on Antipodes Island) to address the (predominantly fisheries bycatch) threats across the species' range. CMS Conference of Parties (COP) adopted this proposal in 2020. The objectives of listing the Antipodean Albatross in Appendix I, while retaining the species' listing in Appendix II of the CMS, were:

- 1) to increase cooperation between Range States, RFMOs, ACAP, non-governmental organisations and other concerned parties to improve the uptake and effectiveness of bycatch mitigation use,
- 2) to reduce the capture of Antipodean Albatross (and other seabird species) in longline fisheries, and
- 3) to incentivise development of advocacy and educational material to fishers and fishing companies about the species' threat status.

These measures should assist in reducing the high mortality rate currently driving the decline. In particular, bycatch reduction over the foraging range of female Antipodean Albatross will address the most urgent conservation issue; the high mortality rate among this demographic group.

To complement the listing of the species in Appendix I of the CMS, New Zealand, Australia and Chile also developed a plan for [Concerted Action for the Antipodean Albatross \(*Diomedea antipodensis*\) \(Annex 1\)](#). CMS Conference of Parties (COP) adopted this plan in 2020.

This CMS plan for Concerted Action Plan outlines the suite of actions to be taken by the CMS Party Range States and CMS Parties that are Members of, or engage with, key RFMOs. Progress on the implementation of this was reported to CMS in [UNEP/CMS/ScC-SC5/Inf.2](#) and ACAP in [PaCSWG6 Inf 12](#).

This paper provides an update on implementation of the CMS plan for Concerted Action. A similar implementation update will be provided to the CMS COP later in the year.

2. PROGRESS IN ACTIVITIES

2.1. New Zealand

New Zealand continued to implement a range of domestic fisheries bycatch management actions as part of the implementation of the [New Zealand National Plan of Action \(NPOA\) – Seabirds 2020](#). This plan introduced Mitigation Standards in fisheries that pose bycatch risk to Antipodean Albatross, which set best practice mitigation use expectations. During 2022 a review on the implementation of the Mitigation Standards was initiated to identify opportunities

to improve the effectiveness and uptake of the standards. This has been supported by an expanded outreach programme to assist fishers in developing vessel specific bycatch mitigation plans. The programme to supply hook-shielding devices, an innovative best practice mitigation measure, for the pelagic longline fishery (the highest risk domestic fishery for Antipodean Albatross) was also continued. A mitigation development project to address the risk of seabird bycatch during haul in longline fisheries was also undertaken and work is continuing to support uptake of the developed devices by fishers and expand efficacy testing more widely across the fleet. A programme of improved digital monitoring of fisheries is underway, with rollout of cameras on pelagic longline vessels scheduled for late 2023, which will improve bycatch and mitigation use data collection.

Similar to the 2020-21 season, New Zealand's research programme on Antipodean Albatross (and all other subantarctic programmes) was suspended in 2021-22 due to COVID-19. Fortunately, independent research continued at Antipodes Island, maintaining the annual monitoring and satellite tracking. During the 2022-23 subantarctic season, government research was resumed, allowing for the continuation of the long-term monitoring and progress on diet and pollutant exposure studies. Further details are provided in Section 2.5.

2.2. Australia

Australia implements a range of domestic management arrangements of relevance to the conservation of the Antipodean Albatross: [Threat Abatement Plan for the incidental catch \(or bycatch\) of seabirds during oceanic longline fishing operations](#), [National Recovery Plan for albatrosses and petrels](#), and [National Plan of Action for minimising the incidental catch of seabirds in Australian capture fisheries](#).

Australia's Threat Abatement Plan identifies the research, management and other actions needed to reduce the impacts of oceanic longline fishing operations to an acceptable level. It requires Commonwealth agencies to act in a manner consistent with the objectives of the plan – to achieve a zero bycatch of seabirds, especially threatened albatrosses and petrels in all longline fisheries.

Under the Threat Abatement Plan, the development of DNA markers is helping to resolve uncertainties in seabird bycatch from longline fisheries in Australian waters. Feather samples are collected by fishing operators from dead bycaught seabirds, with genetic methods used to provide a streamlined framework for the identification of seabird bycatch to validate information collected in logbook entries, observer reports and audits of imagery captured by electronic monitoring systems. SBWG11 Doc 12 provides details of the genetic methods and the potential for their wider application by ACAP Parties, including identifying Antipodean Albatross bycatch.

The Australian National Recovery Plan, released in 2022, guides the activities of government, industry, research organisations and other stakeholders in the protection, conservation and management of listed threatened albatross and petrels under Australia's *Environment Protection and Biodiversity Conservation Act 1999* (Cth). The plan's objective is to improve the conservation status of albatrosses and petrels so that these species are on a trajectory towards no longer being threatened in Australia's jurisdiction. Among other things, the plan provides updated advice about the conservation status of, and threats to the Antipodean Albatross in Australia's jurisdiction, and identifies research and management actions to support the recovery of this, and other threatened albatross and petrel species.

Australia implements a range of actions under the National Plan of Action. The plan aims to minimise and, where practicable, eliminate the incidental catch of seabirds in capture fisheries. The plan promotes national coordination to better understand and mitigate impacts of fishing activities on seabirds across jurisdictions, recognising that the state, Northern Territory and Australian governments have separate regulatory authority in their own jurisdictions and are best placed to determine what mitigation measures are needed. Under the plan, annual reports are available and include seabird bycatch data for the Commonwealth, States and Northern Territory. These reports detail the seabird bycatch trends, actions taken and mitigation in place for each jurisdiction. The plan is currently being reviewed for its relevance and effectiveness.

The Australian Fisheries Management Authority (AFMA) continues to work with the fishing industry to reduce seabird bycatch, particularly that of threatened albatross and petrel species, in Commonwealth-managed fisheries including the Eastern Tuna and Billfish Fishery, and the Southern Eastern Scafish and Shark Fishery. With the COVID-19 pandemic easing, outreach with Australian commercial fishers and access to research and monitoring sites is gradually improving.

2.3. Chile

Chile tiene incorporadas medidas de mitigación para reducir la captura incidental de aves marinas en pesquerías de palangre desde el 2014 y en pesquerías de arrastre a partir del 2020.

Las flotas de arrastre han sido foco de atención en Chile por las altas capturas de aves marinas reportadas en años anteriores. En este sentido y a modo de respaldar las recomendaciones e importancia de generar reportes sobre cálculos de captura incidental utilizando métodos estadísticos sugeridos en SBWG7 Doc. 05 se entregan resultados obtenidos a través del método de estimación de razón simple para el periodo 2015 al 2021 en el documento SBWG11 Doc 20: Bycatch rates for trawling fleets in Chile, 2015–2021. Doce especies principales son observadas en las operaciones de pesca de las flotas de arrastre las que muestran claras diferencias entre ellas. Por lejos, la especie albatros de ceja negra (*Thalassarche melanophris*) es la más importante ave marina capturada con el 87% del total de aves capturadas por todas las flotas analizadas, le siguen el albatros de cabeza gris (*Thalassarche chrysostoma*) con 1,9%, fardela negra grande (*Procellaria aequinoctialis*) con 2,9 % y fardela blanca (*Ardenna creatopus*) con 1,2%

Es necesario tener presente que las tasas y los números de captura incidental de aves marinas están influenciados por una gama de factores ambientales, factores ecológicos y operacionales, que varían en espacio y tiempo. Si bien la estimación de la relación se basa en el supuesto de que el esfuerzo de pesca observado es similar al esfuerzo no observado, Chile realiza esfuerzos por mantener altos niveles de cobertura de muestreo y aleatoriedad en las muestras para disminuir los sesgos.

La especie albatros errante es la especie que se registra en nuestras bases de datos, debido a la dificultad para diferenciarla de la especie *antipodensis* producto del acceso restringido a muestras de plumas o toma de tejidos abordo.

En resumen un total de 44 ejemplares de “albatros errante” fueron capturados observados durante el periodo 2015 al 2021, 3 de ellos observados entre el año 2020 y 2021. Las mortalidades expandidas por estimación de razón simple dan cuenta de un rango de muertes

en la flota sur austral de Chile entre 1 a 20 ejemplares muertos el año 2020 y de 1 a 12 ejemplares muertos el año 2021.

Respecto del registro de capturas incidentales de “albatros errante” en la flota de cerco de Chile desde el año 2015 al 2020 en un total de 5.674 lances observados solo se ha observado una captura incidental sin resultado de muerte para el ejemplar, a la fecha no tenemos capacidad de expandir estas capturas a toda la flota, pero se presume que las mortalidades si existen en esta especie serian marginales a diferencias de otros grupos de aves.

2.4. RFMOs

Because of COVID-19, the RFMOs managing high seas fisheries that pose bycatch risk to Antipodean Albatross continued to mostly be held virtually during 2021 and 2022 with reduced meeting times. However, progress was made towards improving seabird bycatch mitigation measures in several relevant RFMOs. The Western and Central Pacific Fisheries Commission (WCPFC) agreed to conduct review of the current seabird mitigation measure (CMM 2018-03 Conservation and Management Measure to mitigate the impact of fishing for highly migratory fish stocks on seabirds) in 2023 or 2024 whereby new bycatch mitigation studies would be evaluated with respect to bycatch mitigation effectiveness and compared against current ACAP Best Practices ([WCPFC19 Report](#)). Likewise, at the South Pacific Regional Fisheries Management Organisation (SPRFMO) New Zealand indicated that they would undertake a review of seabird bycatch and data collection CMMs (09-2017 and 02-2022, respectively) against best practice advice and welcomed the participation of ACAP and any Members who wished to participate ([SPRFMO11 Report](#)). The Commission for the Conservation of Southern Bluefin Tuna (CCSBT) adopted a Multi-year Seabird Strategy which describes actions towards achieving the objective to reduce or eliminate seabird bycatch, such that SBT fisheries do not impose a significant adverse impact on seabirds ([ERSWG14 Report, Attachment 4](#)). Whilst the Inter-American Tropical Tuna Commission (IATTC) Bycatch Working Group and Scientific Advisory Committee have recommended a review of the relevant seabird bycatch resolution (e.g. [SAC10 Report](#)), achieving this remains a priority action.

2.5. Research

Similar to the previous years, the 2021/22 subantarctic field seasons was affected by COVID-19. However, visits were made to both Antipodes Island and the Auckland Islands by independent researchers, allowing for the collection of key population demographic data, continued deployment of satellite trackers, and collection of blood samples for a genomic study (Walker & Elliot 2022). Government fieldwork on both island groups was resumed during the 2022-23 season, facilitating the continuation of the demographic monitoring, the investigation of UAVs as island-wide survey tools, and the progression of sample collection for diet, stress, and pollutant exposure studies.

The intensive satellite tracking programme of the Antipodes Island population initiated in 2019 was continued with annual tag deployments up until 2022. The focus has now shifted towards the analyses of this highly informative dataset. Tracking deployment in 2023 has shifted to the Auckland Islands population. A total of 209 individuals of various demographic groups (e.g., breeding/non-breeding females, breeding/non-breeding males, and juveniles) have been tracked at Antipodes Island over the course of four years. Tracking data were reported in near live time through an online tracking app with open access to the data. The tracking programme has enabled a better understanding of the entire foraging range of the population. An

assessment of the spatial distribution and fisheries overlap for 2019 and 2020 was reported by Bose & Debski (2021). Ongoing analyses aim to identify where the birds may be most at risk of bycatch, now and in the future, to enable the focus of implementation of and advocacy for bycatch mitigation. The development of an assessment framework for seabirds in the southern hemisphere was continued and expanded to include additional fisheries across the Southern Hemisphere. A multi-threat risk assessment is also underway which aims to quantify risk from bycatch, plastic pollution, and climate change, spatially and develop a tool for testing different management scenarios against population recovery goals. Furthermore, collaborations with Oxford University and Sunshine Coast University aim to provide insights into estimation of fine-scale fisheries interactions and environmental predictors of future bycatch risk, respectively.

A range of samples have been collected over the last two field seasons and analyses thereof are subject to a range of collaborations. Firstly, a collaboration with Victoria University of Wellington is aiming to shed new light on the taxonomic status of the Antipodean Albatross using genomic analyses. Secondly, a collaboration with Auckland University is aiming to provide insights on nutritional stress and environmental change through the use of stable isotope and stress hormone analyses. Thirdly, a collaboration with the University of Tsukuba is aiming to assess the exposure of the Antipodean Albatross, alongside a range of other taxa, to mercury pollution. Results of these collaborations will be made available in due time.

2.6 Overview of progress against Concerted Action Plan

Activity	Output/outcome	Timeframe	Responsibility	Progress by	Progress reported
1. Fisheries bycatch in Range State jurisdictions					
1.1 Continue implementation of effective bycatch mitigation measures in pelagic longline fisheries, trawl and any other relevant fisheries, including outreach to fishers regarding seabird bycatch	Fisheries bycatch risk minimised within Range State jurisdictions	Ongoing	CMS Party Range States	New Zealand	Implementation of New Zealand's NPOA-Seabirds 2020 continued, including review and update of Mitigation Standards, supported by an expanded outreach programme to assist fishers.
				Chile	Continued implementation Chile's NPOA-Seabirds, with update actions to implement resolution 2941 (August 2019) towards the mandatory use of mitigation measures for the reduction of seabird bycatch in the trawl fleet and development of conservation measures and best practices in purse seine fisheries.
				Chile	Development of proposals to list Antipodean Albatross in the National Species Classification Process, and a National Strategy for the Conservation of Wild Bird Species which both consider fisheries threats and bycatch mitigation
				Australia	Ongoing implementation of Australia's TAP-Seabirds and NPOA-Seabirds ensures effective mitigation of seabird bycatch in oceanic longline and trawl fisheries, in particular in the Eastern Tuna and Billfish Fishery (ETBF) and Southern and Eastern Scalefish and Shark Fishery (SESSF) along Australia's eastern seaboard.

1.2 Ensure there is adequate observation coverage to monitor mitigation use and identify any seabird bycatch to species level	Fisheries bycatch levels and risk, at species level, are known and can be reported	Ongoing	CMS Party Range States	New Zealand	Continued implementation of New Zealand's fishery observer programme and development of a comprehensive electronic monitoring programme, planned for roll out in late 2023.
				Australia	AFMA's e-monitoring programme applies to the ETBF along Australia's eastern seaboard, and the TAP-Seabirds aims to identify bycaught seabirds to species level through collection of feather samples and photographs.
				Chile	Continued implementation of scientific monitoring by observers, including their training, and improvements to the analysis of images with incidental captures of seabirds from Chile's Electronic Monitoring System.
1.3 Develop and maintain bilateral/multilateral collaboration on mitigation development, data collection, data sharing and risk assessment. A cooperation arrangement between New Zealand and Chile on seabird conservation has already been agreed and provides a framework for this activity between these two Range States	Collaboration facilities achieving Activities 1.1 and 1.2	Ongoing	CMS Party Range States	New Zealand and Chile	Continued collaboration between New Zealand and Chile under an inter-governmental cooperative arrangement on seabird conservation, including bycatch risk and management.
				New Zealand and Australia	Continued collaboration to better understanding bycatch risks in the Tasman Sea.

2. Fisheries bycatch on the high seas					
2.1 Support regular review, and improvement where necessary, of seabird bycatch conservation and management measures to ensure use of effective bycatch mitigation measures is required, in the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) and in relevant Regional Fisheries Management Organisations (RFMOs): Western and Central Pacific Fisheries Commission (WCPFC), Inter-American Tropical Tuna Commission (IATTC), Commission for the Conservation of Southern Bluefin (CCSBT) and the South Pacific Regional Fisheries management Organisation (SPRFMO)	Fisheries bycatch risk minimised in relevant RFMOs through use of effective bycatch mitigation measures	2020-2022 for initial review; further regular reviews - ongoing	CMS Parties that are Members of, or engage with, key RFMOs	New Zealand and Australia	New Zealand and Australia supported the WCPFC decision to review the seabird bycatch measure CMM2018-03 in 2023-24.
				Australia and New Zealand	Australia and New Zealand supported the development and endorsement of a Multi-year Seabird Strategy by CCSBT to reduce or eliminate seabird bycatch in Southern Bluefin Tuna (SBT) fisheries
				New Zealand	New Zealand will lead a review of the SPRFMO seabird bycatch CMM.
2.2 Support development and distribution of outreach materials to fishers regarding seabird bycatch, including seabird identification guides	Fisheries bycatch risk minimised in relevant RFMOs through increased awareness, improved use of mitigation by fishers, and more accurate reporting to species level	Ongoing	CMS Parties that are Members of, or engage with, key RFMOs	New Zealand	New Zealand continued the development and update of a range of resources for commercial fishers on seabird bycatch reduction: https://www.doc.govt.nz/our-work/conservation-services-programme/csp-resources-for-fishers/
				Australia	Australia provides a range of resources to fishers about reducing seabird bycatch, safe release of any live caught seabirds, and concerning seabird identification.

2.3 Support compliance monitoring of seabird bycatch conservation and management measures in relevant RFMOs	The compliance monitoring and reporting against each RFMO seabird bycatch conservation and management measure is demonstrated in RFMO reports	2020-2022 (and maintained ongoing)	CMS Parties that are Members of, or engage with, key RFMOs	New Zealand	New Zealand's high seas monitoring in the WCPFC area was affected by COVID-19 and whilst no ship boardings were made for this reason, surveillance over-flights continued. Inspection of vessel in New Zealand ports resumed in late 2022.
				Australia	Australia continues to prioritise effective development and implementation of compliance schemes in the RFMOs it is a party to, including supporting efforts to include seabird bycatch reporting to inform both compliance processes and management actions.
2.4 Support robust bycatch related data collection and sharing in relevant RFMOs	Fisheries bycatch risk is documented and measurable through data reporting	Ongoing	CMS Parties that are Members of, or engage with, key RFMOs	New Zealand & Australia	Australia and New Zealand, working closely with Japan, supported the development and endorsement of a Multi-year Seabird Strategy by CCSBT which includes actions to improve data collection.
				New Zealand	New Zealand will lead a review of the SPRFMO data collection CMM in relation to seabird bycatch relevant data.
2.5 Support robust bycatch data reporting and periodic bycatch assessments in relevant RFMOs	Estimation of fisheries seabird bycatch risk at RFMO scale	Ongoing	CMS Parties that are Members of, or engage with, key RFMOs	New Zealand and Australia	Australia and New Zealand, working closely with Japan, supported the development and endorsement of a Multi-year Seabird Strategy by CCSBT which includes actions to improve data reporting and bycatch assessments.
				New Zealand	New Zealand continued development of an assessment framework for seabirds in the southern hemisphere.

2.6 Support data gathering in high seas fisheries where other types of seabird interactions, including possible utilization of seabirds as wild meat, remains poorly known.	Risks posed by all relevant fishing methods are understood	2020-2025	CMS Parties that are Members of, or engage with, key RFMOs	New Zealand and Australia	New Zealand and Australia supported improved data collection in South Pacific Regional Fisheries Management Organisation-(SPRFMO) fisheries, including observer collected data on any seabird interaction with squid jig fisheries.
2.7 Develop collaborations on seabird bycatch mitigation measures with non-CMS Parties fishing in the range of Antipodean Albatross	Fisheries bycatch risk minimised through use of effective bycatch mitigation measures	Ongoing	CMS Party Range States	New Zealand	New Zealand has continued communication/collaborations with non-CMS Parties whose fisheries have been identified as overlapping with Antipodean Albatross, including China, USA and Japan.
				New Zealand & Australia	New Zealand and Australia worked closely with Japan in the development of a Multi-year Seabird Strategy for CCSBT.
				New Zealand & Australia	New Zealand and Australia will work closely with the USA and other interested WCPFC Members to propose revisions to the WCPFC seabird bycatch measure.
				New Zealand	New Zealand and will closely with ACAP, the USA and other interested SPRFMO Members to propose revisions to the SPRFMO seabird bycatch and data collection measures

3. Research					
3.1 Continue a multi-year population project to provide a platform for key research questions (e.g. foraging range, diet) and monitor progress over time	Ongoing assessment of the current status of the population and a better understanding of biological drivers of change	Population monitoring: annual for 2019-2024, then reassess	New Zealand with collaboration from other interested CMS Parties	New Zealand	New Zealand's research programme on Antipodean Albatross in 2021-22 was suspended due to COVID-19. Independent research continued, maintaining annual monitoring and satellite tracking. During the 2022-23 subantarctic season, government research was resumed, allowing for the continuation of the long-term monitoring, the investigation of UAVs as survey tools, and the progressing of diet, trophic, stress, and mercury exposure studies.
3.2 Continue the deployment of tracking devices to better describe areas of fisheries overlap	Detailed knowledge of foraging range, suitable to inform detailed overlap analysis with fishing effort and spatially explicit fisheries risk assessment	2019-21	New Zealand with collaboration from other interested CMS Parties	New Zealand	Intensive satellite tracking at Antipodes Island continued up to and including 2022. Focus is now shifted towards the analyses of this highly-informative dataset, including through a range of collaborations. In 2023 satellite tracking deployments focussed on the Auckland Islands population.
3.3 Continue diet-related sample collection, and undertake analysis, to describe diet and any changes in diet over time	Better understanding of any changes in diet and how this affects population parameters	2019-2024	New Zealand with collaboration from other interested CMS Parties	New Zealand	The collection of feather and blood samples for analyses of stable isotopes and stress hormones as well as the collection of boluses and faecal samples has been progressed in 2022-23. These samples will allow for future assessments of diet and changes.

3.4 Assess levels of plastic ingestion	Better understanding of the potential risk posed by plastic pollution	2021-2024	New Zealand with collaboration from other interested CMS Parties	New Zealand	The collection of boluses and faecal samples has been progressed in 2022-23, allowing for future assessments of plastic ingestion. Additionally, a multi-threat risk assessment will provide spatially-explicit estimates of exposure risk.
3.5 Investigate the nature, extent and drivers of land slips at Antipodes Island	Better understanding of potential risks posed by land slips	2021-2024	New Zealand with collaboration from other interested CMS Parties.	New Zealand	No progress, though planned drone surveys will enable further investigation.
3.6 Develop opportunities into mātauranga Māori (New Zealand's indigenous knowledge) to inform the management of the species and help facilitate opportunities for Ngāi Tahu (the principal indigenous tribe of the southern region of New Zealand) to develop a stronger connection between Ngāi Tahu and <i>D. antipodensis</i>	Mātauranga Māori available to inform future management and conservation actions	Ongoing	New Zealand	New Zealand	Ngāi Tahu representatives indicated that dedicated Ngāi Tahu internships within the New Zealand Government are an effective way to involve Ngāi Tahu and integrate mātauranga Māori in species management. Conversations are ongoing between both parties to find opportunities to progress this.
4. Breeding site management					
4.1 Eradication of mammalian pests at Auckland Island	Safe and protected breeding sites with no human-induced threats	Programme under development, with 10-year indicative timeline	New Zealand	New Zealand	A feasibility study on the eradication of pigs, cats, and mice has been completed (Department of Conservation 2021). With appropriate resourcing and sequencing, the eradication of all three species can be achieved, but can take up to 10 years at the cost of \$84m. A committed investment strategy is the critical next step.

4.2 Continued protection and biosecurity control to main breeding site islands	Safe and protected breeding sites with no human-induced threats	Ongoing	New Zealand	New Zealand	Implementation and enforcement of all protection measures was continued.
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3. ACTION ASSESSMENT

This paper provides the second implementation update against the CMS plan for Concerted Action for the Antipodean Albatross. Concerted Action should be continued as planned. Progress towards achieving a number of fisheries management and research objectives are reported despite some activities having not been progressed due to COVID-19 during 2020-21 and 2021-22. Focus should continue to progress these areas in the future. The CMS plan for Concerted Action may need revision in future years and the need for revision will be considered as part of the next report on the implementation of this Concerted Action.

No changes to the Concerted Action plan are proposed at this time.

4. REFERENCES

Bose, S. and Debski, I., 2021. [Antipodean albatross spatial distribution and fisheries overlap 2020](#). Prepared by the Department of Conservation, 36 p.

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ANNEX 1. CMS CONCERTED ACTION PLAN



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<https://www.cms.int/en/document/concerted-action-antipodean-albatross-diomedea-antipodensis>