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**PROPOSAL FOR THE INCLUSION OF
THE FLESH-FOOTED SHEARWATER (*Ardenna carneipes*)
ON APPENDIX II OF THE CONVENTION**

Summary:

The Governments of New Zealand, Australia and France have jointly submitted the attached proposal for the inclusion of the flesh-footed shearwater (*Ardenna carneipes*) on Appendix II of CMS.

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PROPOSAL FOR INCLUSION OF FLESH-FOOTED SHEARWATER (*Ardenna carneipes*) ON APPENDIX II OF THE CONVENTION

A. PROPOSAL

Inclusion of flesh-footed shearwater (*Ardenna carneipes*) on Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

B. PROPONENT

The Governments of New Zealand, Australia and France.

C. SUPPORTING STATEMENT

1. Taxonomy

- 1.1 Class: Aves
- 1.2 Order: Procellariiformes
- 1.3 Family: Procellariidae
- 1.4 Genus, species or subspecies, including author and year: *Ardenna carneipes* (Gould, 1844)
- 1.5 Scientific synonyms: *Ardenna carneipes* ssp. *carneipes* (Christidis and Boles, 2008)
Puffinus carneipes (Gould, 1844)
- 1.6 Common name(s), in all applicable languages used by the Convention
 - English: Flesh-footed shearwater
 - French: Puffin à pieds pâles
 - Spanish: Pardela negruzca, Pardela paticlara

2. Overview

Flesh-footed shearwaters nest during the Austral summer on islands around northern New Zealand, on Lord Howe Island and Phillip Island (Norfolk Island group) off eastern Australia, islands off South Australia and Western Australia and on Saint Paul and Amsterdam Islands in the Indian Ocean. Non-breeding and juvenile birds migrate through tropical waters to the Northern Hemisphere, in particular to waters off northern far-east Asia. Flesh-footed shearwaters are known to be highly susceptible to bycatch in fisheries, particularly longline fisheries (e.g. Edwards et al. 2023), which occur across their migratory pathway. Other threats such as invasive predators, plastic ingestion and climate change have also been identified. Co-ordinated international actions are required to minimise threats from fisheries bycatch across a range of fleets operated by both CMS Parties and others. These include engagement with Regional Fisheries Management Organisations (RFMOs), which agree measures for high seas fishing operations. Coordinated international actions will also assist to minimise other threats.

2.1 Cultural Context

The flesh-footed shearwater, or toanui, is culturally and ecologically significant to Māori, New Zealand's indigenous people, particularly for hapū (subtribes or groupings of whanau or families) or iwi (tribes) connected to the offshore islands around the North Island and Cook Strait on which the birds breed. Traditionally, seabirds like the toanui were valued as seasonal food sources, while their nesting sites were carefully managed to ensure their protection and

sustainability. When the birds' kai (food) was plentiful, then the people also flourished. Should the birds or their kai (food) not be healthy or plentiful, then the taiao (environment) was out of balance and needed to be attended to in order to recover the balance. The birds were used for ceremonial practices and decorations, e.g. their feathers were used for cloaks and adornment. They were also valued as navigational indicators, to mark seasonal changes, and for the nutrients they contributed to the soil and plants via their guano. Today, some iwi are actively involved in conservation efforts. These collaborations reflect a kaitiakitanga (guardianship) relationship, where Māori knowledge and values guide the protection of the species and its habitat. The toanui presence is a marker of healthy marine and terrestrial ecosystems, and its decline due to threats like plastic ingestion and fishing bycatch is a concern shared by Māori. See Annex 1 for more detailed perspectives of the hapū (sub-tribes) Ngā Mahanga and Ngāti Tairi (Ngā Mahanga a Tairi), with respect to Motumahanga Island, one of the breeding locations for toanui.

In Australia, the flesh-footed shearwater is known to occur on the lands of at least the following Indigenous peoples: Southern Noongar, Esperance Nyungars, Ngadju and Nauo (Carlile et al. 2021).

3 Migrations

3.1 Kinds of movement, distance, the cyclical and predicable nature of the migration

Flesh-footed shearwaters are annual migrants, breeding on islands in the Southern Pacific and Indian Oceans and migrating to the Northern Hemisphere during the non-breeding season. As annual breeders, this migration is repeated on a predictable annual cycle related to the timing of breeding, as outlined below. Where juvenile birds have been tracked, they have followed similar pathways to those exhibited by adults on migration. However, juveniles may spend considerably more time in the tropical waters between breeding and non-breeding areas over which adults migrate rapidly. Our knowledge of year-round movements is based on tracking studies, mostly using geo-location sensing (GLS) tags, of birds from various colonies (Birdlife 2025).

Tracking from four breeding colonies in New Zealand (Fischer et al. 2024) show a foraging range over the breeding season (Oct-Apr) centred on northern New Zealand, extending westwards over the Tasman Sea to Australian waters and eastwards to the Louisville Ridge in the high seas of the South Pacific Ocean (Figure 1). Their non-breeding distribution (May-Sept) is highly centred on waters to the east of Japan, both in Japanese waters and the high seas (Figure 1). The migratory pathway crosses the waters of numerous island states of the western and central Pacific.

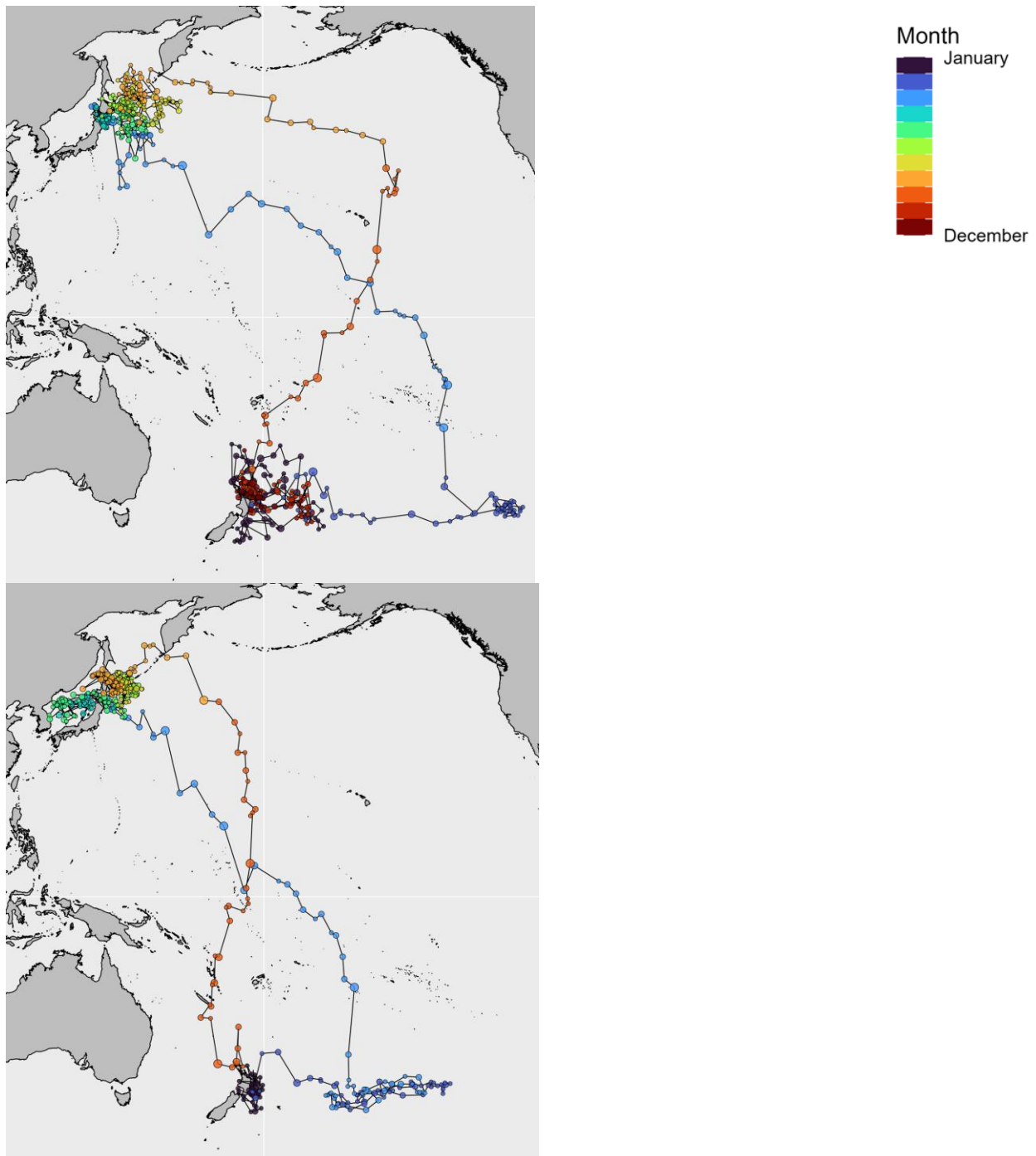


Figure 1: Example year-round tracks of flesh-footed shearwaters from New Zealand colonies showing their breeding and non-breeding areas together with migratory pathways. Locations are colour-coded by month.

Movements of birds breeding on Lord Howe Island broadly mirror the migratory pathway of New Zealand colonies. Birds tracked from Lord Howe Island migrated to the north-west Pacific Ocean, with approximately 70% wintering to the east of Japan in the Kurashio and Oyashio currents, around the Bonin Islands in the north Philippine Sea, or in the eastern Sea of Japan (Reid et al. 2013a). Others spent a varying amount of time in the Yellow and East China seas, or in the western Sea of Japan (Reid et al. 2013a). During the breeding season, Lord Howe Island breeding birds forage in eastern Australian waters where they are primarily confined within the jurisdictional Australian Fishing Zone. Foraging is strongly associated with sea-surface temperatures exceeding 24° C (Thalmann et al. 2009).

Flesh-footed shearwaters from Western Australian colonies either overwinter in the northern Indian Ocean (Lavers et al. 2019a) or join birds from eastern Australia in the north-west Pacific (Rayner et al. 2011; Lombal et al. 2018). Based on at-sea observations, Gibson-Hill (1953) and De Silva and Perera (1995) predicted that Western Australian flesh-footed shearwaters would overwinter in the northern Indian Ocean. Lavers et al. (2019a) confirmed that at least a portion of the Western Australian flesh-footed shearwater population spends the non-breeding period in the Arabian Sea and Bay of Bengal off western Sri Lanka. Incomplete tracking data (GPS devices ceased transmission in the central Indian Ocean) for flesh-footed shearwaters from King George Sound, Western Australia, also indicated this migration route and overwintering area (Powell 2009). This region is highly productive and a major upwelling region that attracts a diversity of marine predators (Prasad and Nair 1960, Ballance et al. 1996, Vinayachandran et al. 2004, Catry et al. 2009). Wintering flesh-footed shearwaters also appeared to exploit this area, being one of the most commonly recorded seabirds in the region, and in the highly productive waters of the Gulf of Oman (Nezlin et al. 2007) during mid-April to August (Ballance et al. 1996, Campbell et al. 2017), suggesting the area is frequented by the Western Australian breeding population.

The movements of Saint Paul and Amsterdam Island breeding birds are less known. Studies on movements at sea using telemetry during the breeding season are being carried out.

3.2 Proportion of the population migrating, and why that is a significant proportion

It is assumed that all individuals migrate between their southern breeding range and northern non-breeding range.

4. Biological data (other than migration)

4.1 Distribution (current and historical)

In New Zealand, flesh-footed shearwaters breed on islands around the North Island and Cook Strait including Hen/Taranga & Chickens/Marotere Islands (Lady Alice/Mauimua, Whatupuke, Coppermine/Maupane, Mauitaha), Mercury Islands (Middle/Ātiu, Green, Korapuki, Stanley, stack north of Stanley), Ohinau, stack off Ohinau Island, Karewa, Kauwahaia, Motumahanga, Middle Trio, and Titi Islands. Elsewhere, flesh-footed shearwaters breed on Lord Howe Island, Phillip Island off Norfolk Island, in South Australia (Smith Island and Lewis Island), on at least 46 islands off the southern coast of Western Australia and at Saint Paul and Amsterdam Islands, a French territory in the Indian Ocean. In Western Australia, the species was last recorded breeding on the mainland in 1937, on Mistaken Island in 1906, Green Island before 1978, Goose Island in 1985 and Migo Island in 2005 (Lavers 2015). It is uncertain whether there may have been additional colonies prior to the introduction of mammalian pests in these regions. The colonies on Saint Paul and Amsterdam Islands are the only ones known in the Indian Ocean. The colony on Saint Paul Island was discovered in 1970, when there were just 20 to 30 pairs. In 1985, around 629 breeding pairs were on the island. On Amsterdam Island, between January 2021 and December 2022, seven burrows were detected using camera traps. Breeding was confirmed, with individuals observed incubating an egg. A total of 36 acoustic contacts was made in 2021-2022.

4.2 Population (estimates and trends)

The most recent review of the New Zealand population identified 24 current or past breeding sites with some only having a single breeding pair (Waugh et al. 2013). Surveys since 1990 have only confirmed 15 islands where the species still persists. Colonies with more than 1000 breeding pairs are Middle/Ātiu, Ohinau, Karewa, Lady Alice/Mauimua, Whatupuke and Coppermine/Maipane Islands. The current New Zealand population is estimated at 21,000 breeding pairs. Some colonies are increasing while others are stable or slightly decreasing.

The Australian population of flesh-footed shearwaters is estimated at 42,000 pairs about evenly split between Lord Howe Island and colonies further west (Carlile et al. 2021). This estimate includes 779 – 2,869 breeding pairs on South Australian islands, 18,300 – 35,900 breeding pairs on Western Australian islands (Lavers 2015), 22,654 breeding pairs on Lord Howe Island (Lavers et al. 2019b) and 1 – 10 pairs on Phillip Island (Priddel et al. 2010). The population on Lord Howe Island was estimated at 20,000 – 40,000 breeding pairs in 1978 (Fullagar and Disney 1981) and 17,462 breeding pairs in 2003 (Priddel et al. 2006). In 2009, the population was estimated at 16,267 pairs (95%-confidence interval: 11,649 – 21,250), representing a decline in the number of pairs of 6.8% since 2003 (Reid et al. 2013b). The most recent population estimate of 22,654 pairs (95%-confidence interval: 8,156 – 37,909) (Lavers et al. 2019b) may suggest the population has recovered from this decline (Carlile et al. 2019). There is no trend information available from elsewhere.

The colony on Saint Paul Island was discovered in 1970, when there were just 20 to 30 pairs. In 1985, around 629 pairs were breeding on the island. The latest survey, carried out in December 2018, counted around 2,000 pairs (Barbraud et al. 2021). This colony is therefore growing.

4.3 Habitat (short description and trends)

Flesh-footed shearwaters are a highly pelagic seabird, coming to land only to breed. The breeding burrows are normally dug on well-drained sites with sandy or clay soils, and under tall forest or low coastal shrubs. Colonies are found mainly on islands generally free from introduced mammalian predators such as rats, cats and pigs. Flesh-footed shearwaters forage over warmer waters north of 40°South, either over shallow inshore seas or over deep water beyond the continental shelf.

4.4 Biological characteristics

Flesh-footed shearwaters are nocturnally active at breeding grounds. The birds are powerful diggers and dig burrows 1-4 metres in length. They breed annually, laying a single egg and are highly philopatric. Immature flesh-footed shearwaters start to return to colonies as 4 year-olds and first start breeding at 5-6 years of age. Most feeding at-sea is during daylight hours. Flesh-footed shearwaters feed primarily on small fish caught by shallow dives into shoals, or occasional deeper dives reaching 30 metres in depth. They sometimes eat small squid. Reproductive success has been found to be variable between colonies, from as low as 30% and up to 75%, and longevity is around 35 years.

4.5 Role of the taxon in its ecosystem

Like many seabirds, flesh-footed shearwaters play an important ecological role in both marine and terrestrial ecosystems. On the islands where they breed, seabirds transfer nutrients from the ocean to the island, via their guano, whereby the resulting fertilisation promotes plant growth and associated biodiversity. At sea, as top predators, they help regulate prey populations and play an integral role in transferring energy from mid-trophic prey to higher trophic levels.

5. Conservation status and threats

5.1 IUCN Red List Assessment (if available)

IUCN Red List Category and Criteria - Global Assessment: Near Threatened (A2bcde + 3bcde + 4bcde, ver 3.1)

Date assessed: 07 August 2018

Year published: 2019

Justification: The IUCN note that despite poor historical records and the current lack of data across all populations to assess the global population, there is evidence that some populations have been affected by fisheries and some populations have declined.

Previously published IUCN Red List Assessments:

2018 — Near Threatened (NT)

2017 — Near Threatened (NT)

2016 — Near Threatened (NT)

2012 — Least Concern (LC) as *Puffinus carneipes*

2009 — Least Concern (LC) as *Puffinus carneipes*

2008 — Least Concern (LC) as *Puffinus carneipes*

2004 — Least Concern (LC) as *Puffinus carneipes*

2000 — Unknown (LR/lc) as *Puffinus carneipes*

1994 — Unknown (LR/lc) as *Puffinus carneipes*

1988 — Unknown (LR/lc) as *Puffinus carneipes*

5.2 Equivalent information relevant to conservation status assessment

The New Zealand Threat Classification System assesses flesh-footed shearwater as At Risk (Relict) in the 2021 Assessment (Robertson et al. 2021). The Relict qualifier is given to a taxon whose population has declined since human arrival to less than 10% of its former range but has stabilised.

In Australia, *The Action Plan for Australian Birds 2020* (Garnett and Baker 2021) aims to provide a national overview of the conservation status of all birds occurring in Australian territory, identifying threats and recommended research and management actions that will minimise those threats. The 2020 Action Plan assessed the flesh-footed shearwater as Near Threatened (IUCN Red List criteria: A2bcde+3bcde+4bcde) (Carlile et al. 2021). Loss of breeding locations and intensity of threats suggest a decline approaching 30% in three generations (39 years).

In France the species is on the “Liste rouge des oiseaux des Terres australes 2015” (the “Red list of birds of the Southern Lands”).

5.3 Threats to the population (factors, intensity)

There are four main threats to flesh-footed shearwaters, listed in order of greatest likely risk, although robust comparative quantitative assessment of the magnitude of these threats is currently lacking.

5.3.1 Fisheries bycatch

Fisheries interactions are considered the major threat to this species. Flesh-footed shearwaters are known to seek out fishing vessels and attempt to take baits off longline hooks or consume fish waste/discharge. The use of seabird bycatch mitigation measures is required to reduce the likelihood of bycatch in longline fisheries.

The bycatch within New Zealand waters from fisheries is routinely monitored through fisheries monitoring programmes. The total predicted annual deaths (including allowance for cryptic mortality) in New Zealand commercial fisheries is 368, with 208 deaths in bottom (demersal) longline fisheries, 120 in trawl fisheries and 26 in surface (pelagic) fisheries (Edwards et al. 2023).

In Australia, all interactions with protected species are reported by the Australian Fisheries Management Authority available here: [Endangered and Threatened Species Reporting | Australian Fisheries Management Authority](#).

Historically, records of seabird bycatch in the Australian Eastern Tuna and Billfish Fishery (ETBF) estimated 8,972–18,490 individuals (0.38 birds caught per 1,000 hooks) incidentally killed between 1998 to 2002 (Baker and Wise 2005), sufficient to decrease the population. From 1992 to 1996, flesh-footed shearwaters accounted for around 10% of the observed estimated seabird bycatch rates on Japanese long-line vessels fishing within the southern Australian Exclusive Economic Zone (EEZ) (varied between 0.1 and 0.3 birds per 1,000 hooks) (Tuck et al. 2003). An additional 677 flesh-footed shearwaters were also reportedly taken each year in the Japanese neon flying squid driftnet fishery (Ogi 2008) and 116 in the land-based salmon gillnet fishery (DeGange and Day 1991).

While these high levels (Baker and Wise 2005) declined greatly when fishing fleets ceased operating near Lord Howe Island in 1999 (Reid et al. 2013), and further with the development of the Australian Government's 'Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations', bycatch data collected from the ETBF between 2001 and 2006 showed the majority of the 280 specimens retained for necropsy (78%) to be dominated by flesh-footed shearwaters (Trebilco et al. 2010). More recent genetic analysis of feather samples collected from bycaught seabirds in the ETBF fishery between 2019 and 2022 also highlights the ongoing prevalence of flesh-footed shearwater incidental capture during longline fishing operations in Australian waters (*Ardenna carneipes*, $n = 27/59$, 46%) (Polanowski et al. 2024). While feather samples analysed at this time represented only 24% of the overall seabird bycatch deaths ($n = 211$) in this fishery during this period, the high representation of flesh-footed shearwaters in the overall species composition of bycatch is of ongoing concern (Polanowski et al. 2024).

In Western Australia, interactions between purse-seine fisheries and flesh-footed shearwaters have been documented (Lavers 2015; Norriss et al. 2020). There was a total of 4,963 logbook-reported interactions with flesh-footed shearwaters in the Western Australian South Coast Purse Seine Managed Fishery (SCPSMF) from 2009–10 to 2021–22, with 570 birds killed and nine injured (DCCEEW 2022). Most of the interactions occur in the King George Sound (one of the fishery zones) as the shearwater's breeding cycle coincides with the sardine migration into the area. These studies remain important references, however, there have since been sustained efforts to reduce risk to seabirds. Longstanding mitigation measures such as dawn closures and a Special Management Period (diurnal closures during the period of peak interactions from March to April) remain in place and have been strengthened in recent years through gear modifications (trial weighted lines tethered in nets to avoid folds), increased observer coverage, and industry-led initiatives. Fleet capacity has also declined over time, with only 3.5 vessels now operating full-time in the SCPSMF. While 2024 and 2025 observer data are not yet published, preliminary analysis suggests observed mortality rates during this

period are the lowest on record and remain well within the species' estimated Potential Biological Removal threshold.

Bycatch from gill-nets, purse-seines, longlines and inshore trawl have also been recorded across the range (Japan, Australia, Russian Federation and New Zealand) affecting the population.

France created the French Southern Territories National Nature Reserve in 2006, which included the entire land surface of the two islands (around 7,700 km²) and 52.5% of their territorial waters, i.e. 15,700 km². Décret no. 2016-1700 of 12 December 2016 extending and amending the regulations governing the French Southern Territories National Nature Reserve also marked the creation of the world's first strict fisheries reserve, covering a maritime area of 665,969 km². France has set up satellite surveillance with the French Navy on site.

Given the wide foraging range of flesh-footed shearwaters across the high seas and numerous national jurisdictions where longline or trawl fisheries operate, the risk of bycatch is likely to be high. While appropriate best-practice mitigation measures have been developed by Agreement on the Conservation of Albatrosses and Petrels (ACAP) Parties, these are not fully applied within the national jurisdictions of all Range States (Baker et al. 2024) or on the high seas. In addition, relevant conservation and management measures that have been agreed within RFMOs (in particular, the tuna RFMOs) are all well below globally recognised best practice and most likely are inconsistently applied, although a small number of jurisdictions, such as New Zealand, require best-practice mitigation use over and above RFMO measures. Over tropical waters in particular there are few, if any, requirements to use seabird bycatch mitigation. Observer coverage and data on the extent of mitigation use, though often mandatory and with minimum requirements for participating members, have been variable and often poor across the different RFMOs. Illegal, Unregulated and Unreported (IUU) fishing remains an unknown threat in most high seas areas.

5.3.2 Predation by introduced mammals

Introduced mammalian predators such as feral cats, rabbits, pigs, mice and rats can greatly impact or even extirpate colonies of seabirds such as flesh-footed shearwater. All of the New Zealand breeding sites except two are now cleared of introduced predators or have active pest control happening.

Australia's largest colony on Lord Howe Island is now free from introduced mammals, with rats, mice, pigs, goats and cats having been removed. Phillip Island (off Norfolk Island) underwent a rabbit eradication in the 1980s, after their grazing denuded most of the vegetation. The island is now free of introduced mammals. Introduced European rabbit and feral goat grazing have affected some Western Australian islands and foxes are suspected to have extirpated mainland breeding colonies (Lavers 2015). Introduced herbivores such as rabbits and goats can decimate seabird habitat through overgrazing, leading to increased erosion, or trampling of burrows.

On Saint Paul Island, flesh-footed shearwaters have likely benefited from the eradication of black rats and rabbits in 1997 and are now only exposed to one introduced mammalian predator, the house mouse.

5.3.3 Plastic pollution

Harmful marine debris includes land-sourced garbage, fishing gear from recreational and commercial fishing abandoned or lost to the sea, and vessel-sourced, solid, non-biodegradable floating materials disposed of or lost at sea. Most of these items are made of synthetic plastics. Harmful marine debris is recognised as a ubiquitous, global problem. Many

industry, government and non-government stakeholders are also working to address marine debris and related issues (e.g. through beach clean-up and management of litter and illegal dumping). Such debris has the potential to entangle flesh-footed shearwaters or be consumed by them.

Plastic debris has been observed in and around seabird colonies on remote islands in the Pacific Ocean and has caused chick mortality. The Lord Howe Island population has encountered problems with plastics being ingested by the birds and this same threat may also exist in the New Zealand populations. Plastics have been found, presumably regurgitated, on the surface of flesh-footed shearwater colonies on Ohinau Island, New Zealand (Buxton et al., 2013). Evidence of plastic ingestion during foraging is high on Lord Howe Island, with a range of sublethal impacts (Lavers et al. 2014). However, there remains no evidence of a population-level effect at this stage. Plastic ingestion appears to be much less prevalent at flesh-footed shearwater breeding sites in Western Australia (Paterson and Dunlop 2018), possibly due to the different migratory pathways between east and west populations in Australia.

In August 2003, 'Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris' was listed as a key threatening process under the Australian Government's *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans incorporates actions needed to abate the listed key threatening process, particularly actions to develop understanding about microplastic impacts and the potential role of new technologies in waste management. The actions are intended to be feasible, effective and efficient, as required by the EPBC Act. The plan supports Australia to respond to the impact of marine debris on vertebrate marine life, and identifies the research, management and other actions needed to reduce the impacts of marine debris on affected species.

5.3.4 *Climate change*

Climate change models predict an increasing frequency and intensity of storm events in the near future (Intergovernmental Panel on Climate Change (IPCC) 2018). Any such increase in storm-related mortality at the colonies will impact flesh-footed shearwater populations. For example, in the 2023 season on Ohinau Island, three ex-tropical cyclones produced a series of extreme rainfall events that flooded the shearwater burrows. Breeding success ranged from 0% to 30% across sub-colonies with different aspect and slopes, well below the normal 50-60% (Ray and Burgin 2023). It is predicted that ocean productivity may decline with the observed shifts in ocean temperatures, acidity and oxygen levels over this period (IPCC 2018), which may in turn impact the foraging range and food availability for flesh-footed shearwaters.

5.3.5 *Collisions with vessels at sea (light attraction)*

Light attraction and disorientation can also occur due to ships at sea (Glass and Ryan, 2013; Montevecchi, 2006), leading to possible collisions or grounding on vessels that are brightly lit at night (Brothers et al., 1999). Fog and rainy conditions exacerbate these impacts (Rodriguez et al., 2019). The impact of light pollution at sea, from ships on flesh-footed shearwaters, is currently poorly understood.

5.3.6 *Expansion of offshore wind farms*

Offshore wind energy installations are seen as an emerging threat to seabirds, with increasing farm development within the range of flesh-footed shearwaters. Wind turbines at-sea are expected to be larger than those on land as there will be fewer restrictions on the height and number of turbines in the open ocean. The height of the turbines and the length of the blades will have a direct impact on birds if collisions occur at sea. China is leading development of

offshore wind energy with the latest turbines being designed exceeding published expectations for overall size and energy capacity (Zhang and Wang, 2022). For example, the turbines under development in 2025 have an operating capacity of 26 Megawatts, blades up to 150 metres long and an overall diameter spanning 310 metres. Even with currently available smaller offshore wind turbines, it will become hard for birds to navigate safely through these structures if they are placed near breeding colonies where they interfere with access routes, in favoured foraging areas or along migration routes. Whether the birds will learn to avoid the farms and therefore be displaced from foraging habitat or will pass through and risk collision, is currently unknown. Research is urgently needed on flight heights of different species as well as more detailed information on preferred colony access routes, foraging zones and migration paths across multiple colonies and species.

5.4 Threats connected especially with migrations

The threats from fisheries bycatch, plastic pollution and climate change are all exacerbated by the highly migratory nature of flesh-footed shearwaters. In particular, their widespread movements expose birds to a greater range of fisheries, including those under different national jurisdictions with little or no management of seabird bycatch. Likewise, it increases their chances of encountering areas of high plastic pollution and changing oceanographic conditions related to climate change.

5.5 National and international utilization

Flesh-footed shearwaters are fully protected within New Zealand, Australia and France, and there is no known intentional utilization of this species.

6. Protection status and species management

6.1 National protection status

New Zealand

Flesh-footed shearwater is absolutely protected in New Zealand under the Wildlife Act 1953. It is an offence not to report accidental or incidental killing of this species while fishing in New Zealand fisheries waters. Regulations under the Fisheries Act 1996 require the use of various mitigation measures to reduce seabird bycatch in relevant commercial fisheries. All the current colonies are classified as Nature Reserves or managed as protected sites if in private ownership. For those sites with protection under the Reserves Act 1977 it is an offence to take, destroy or injure any bird or nest. Various tribal authorities in New Zealand are involved with managing these sites including Ngāti Wai and Ngāti Hei.

Australia

The flesh-footed shearwater is a protected migratory species under Australia's national environmental law – *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). As a listed migratory species, it is a matter of national environmental significance and it is an offence to kill, take, trade, keep, or move a listed species in a Commonwealth area, unless a permit has been obtained, or in the case of a commercial fishery, where its management arrangements have been accredited by the Minister for the Environment. The EPBC Act prohibits a person taking an action that has, will have, or is likely to have, a significant impact on a listed migratory species unless the Minister for the Environment has given approval.

The species is listed on the Japan-Australia Migratory Bird Agreement (JAMBA) and the Republic of Korea -Australia Migratory Bird Agreement (ROKAMBA). These legally binding

agreements provide an important mechanism for pursuing conservation outcomes for migratory birds, including migratory seabirds. Each of these agreements provides for the protection and conservation of migratory birds and their important habitats, protection from take or trade except under limited circumstances, the exchange of information, and building cooperative relationships.

Most breeding colonies in Australia are protected and in reserves.

France

The Arrêté of 14 August 1998 presents protection measures for birds represented in the French Southern and Antarctic Lands and prohibits the destruction or removal of eggs or nests, the destruction, mutilation, capture, naturalization of this species or, whether alive or dead, their transport, peddling, use, offering for sale, sale or purchase.

6.2 International protection status

None. Whilst the closely related Pink-footed Shearwater (*Ardenna creatopus*) has been listed on Annex 1 of ACAP, flesh-footed shearwater has not yet been listed on ACAP.

6.3 Management measures

In New Zealand, all the islands with breeding sites are classified as Nature Reserves or protected by agreements with private landowners. New Zealand has established a range of regulatory requirements and non-regulatory standards for the use of seabird bycatch mitigation measures in all commercial longline and trawl fisheries. These are laid out in a National Plan of Action – Seabirds 2020¹, which sets a vision of working towards zero fishing-related seabird mortalities. New Zealand has only modest levels of fishing activity in the high seas, where seabird bycatch mitigation use is required by permit in full compliance with relevant RFMO measures. The implementation of the National Plan of Action is facilitated by a range of practical support and research projects.

In Australia, flesh-footed shearwaters are managed through both national and sub-national legislation and regulatory measures. At the national level, the EPBC Act provides for the development and implementation of wildlife conservation plans for listed migratory species. The Australian Government's *Wildlife Conservation Plan for Seabirds* outlines national activities to support seabird conservation initiatives, including flesh-footed shearwaters, and provides a strategic framework to ensure these activities plus future research and management actions are integrated and remain focused on the long-term survival of seabird populations and their habitats. The *Wildlife Conservation Plan for Seabirds* outlines the statutory elements as legislated by the EPBC Act by addressing topics relevant to the conservation of seabirds, including a summary of Australia's commitments under international conventions and agreements (Commonwealth of Australia 2020).

Australia implements seabird-specific bycatch mitigation requirements in its Commonwealth Fisheries through domestic legislation which meet their international obligations under a range of RFMOs.

Longline fishing has been listed as a key threatening process under the EPBC Act since 1995. As a result, the Australian Government has in place a threat abatement plan titled the *Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (2018)* (seabird TAP). The ultimate aim of the seabird TAP is to achieve a zero

¹ <https://www.mpi.govt.nz/fishing-aquaculture/sustainable-fisheries/managing-the-impact-of-fishing-on-protected-species/reducing-deaths-of-seabirds/>

bycatch of seabirds, especially threatened albatross and petrel species, in all longline fisheries. Recognising the availability of current mitigation methods, the objective of the current TAP is to further reduce the seabird bycatch and bycatch rate during oceanic longline fishing operations in the Australian Fishing Zone.

The seabird TAP specifies a range of actions for the Australian Fisheries Management Authority to implement. These include: i) requiring the adoption of proven mitigation measures that ensure the performance criteria for each Commonwealth-managed longline fishery are achieved in all areas and seasons; ii) minimum independent monitoring; and iii) adaptive management if performance criteria are exceeded.

Trawl vessels operating in the South East Trawl and Great Australian Bight Trawl sectors are not permitted to discharge offal while fishing gear is in the water during daylight hours and must have measures in place to reduce seabird interactions with warp wires (e.g. bird bafflers or submerged warp wires).

Best-practice mitigation, monitoring and reporting guidance is also provided through the National Plan of Action for minimising the incidental catch of seabirds in Australian capture fisheries, which is administered by the Australian Government's Department of Agriculture, Fisheries and Forestry.

There are no active fisheries in the national jurisdiction around the two French breeding islands.

The foraging range of flesh-footed shearwaters overlaps with three tuna RFMOs: the Western and Central Pacific Fisheries Commission (WCPFC), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), and the Indian Ocean Tuna Commission (IOTC). The foraging area also overlaps the South Pacific Regional Fisheries Management Organisation (SPRFMO) and the Southern Indian Ocean Fisheries Agreement (SIOFA) which cover other fish stocks. All of these RFMOs have conservation and management measures in place regarding seabird bycatch; however, the measures vary in their mitigation requirements, specifications and spatial extent. None of the adopted tuna RFMO measures reflect best-practice mitigation advice developed by ACAP, and notably many do not require the use of seabird bycatch mitigation in tropical areas (e.g. from 25°S to 23°N in the WCPFC area) through which flesh-footed shearwaters migrate. Limited tracking indicates these tropical areas are of particular importance to juvenile birds (Fischer et al. 2023). Observer coverage and data collection regarding bycatch also vary between RFMOs, and in general are too poor to make robust estimates of the bycatch of flesh-footed shearwater.

6.4 Habitat conservation

In New Zealand, all the islands with breeding sites are predator-free sites except Mauitaha and Ararara Islands which are part of an agreed cultural protection site for the last Polynesian rat (*Rattus exulans*) population in Northland, and Kauwahaia Island which is connected at low tide to the mainland. The pest-free sites are checked annually by mammal detection dogs to ensure they remain free of introduced predators. Iwi (Māori tribes) have been involved in habitat conservation efforts, for example Ngāti Hei, in partnership with the Department of Conservation, has worked to remove the invasive species (rats) on Ohinau Island and are now looking at other islands in their tribal area for possible eradication of pests and translocation of this species.

In Australia, most breeding sites are within reserves and are protected. On Lord Howe Island, at least 5 ha of flesh-footed shearwater breeding habitat was lost last century ago to conversion to farmland (Fullagar and Disney 1981). Total colony area declined from 37.8 ha in 1978 to 24.3 ha in 2002 (Priddel et al. 2006), primarily due to land conversion for residential

and agricultural purposes. Total colony area remained stable between 2002 and 2009 (24.7 ha in 2009 (Reid et al. 2013b) and increased to 31.6 ha by 2018 (Lavers et al. 2019b)).

A key management priority in Australia is to remove goats and rabbits from former breeding islands and restore lost flesh-footed shearwater colonies (Commonwealth of Australia 2020).

The French breeding sites are within reserves and are protected.

6.5 Population monitoring

The New Zealand Department of Conservation has funded annual population assessments and demographic monitoring on two sites (Ohinau Island and Lady Alice/Mauimua Island) and carried out surveys to estimate population sizes and trends on other larger colonies (those with more than 100 pairs).

Monitoring of the population in Australia is poor. Lord Howe Island colonies have had four surveys reported since 1978 with similar techniques (Carlile et al. 2019) but most other sites have been visited infrequently (Lavers 2015). A key management action priority in Australia is to monitor the population across the range of the species and identify trends in South Australia and Western Australia (Commonwealth of Australia 2020).

Regarding monitoring of French populations, the Institut Polaire Français Paul Emile Victor is piloting a network of four study sites stretching from the Antarctic to the subtropical biome, involving more than 30 marine species that have been monitored for more than 60 years. The observatory part of the project monitors population abundance, their distribution and their degree of plastic contamination. At this stage flesh-footed shearwater is not directly part of the program but information collected is relevant.

7. Effects of the proposed amendment

7.1 Anticipated benefits of the amendment

Including flesh-footed shearwater on Appendix II of CMS is anticipated to raise awareness of the species and the threats that it faces amongst CMS Parties, CMS non-Party Range States and relevant international governmental organisations including RFMOs. As such, it is hoped that this will lead to increased cooperation between CMS Parties, Range States, RFMOs, governmental and non-governmental organisations and other concerned parties to improve the uptake and effectiveness of seabird bycatch mitigation use in fisheries across the range of the species. This, combined with improved compliance monitoring and bycatch data collection, would lead to reduced captures of flesh-footed shearwater (and other seabird species) in long-line and trawl fisheries. This addresses the most urgent and perhaps most manageable conservation issue faced by the species. It may also incentivise development of advocacy and educational material to fishers and fishing companies about the status of this bird.

Additionally, listing on Appendix II will elevate the suitability score of flesh-footed shearwater for inclusion on Annex 1 of ACAP (Tasker et al. 2024). A listing on Annex 1 of ACAP would further facilitate the anticipated benefits identified here as ACAP is very active in the development and promotion of best-practice seabird bycatch mitigation advice for relevant fisheries.

An Appendix II listing on CMS would also promote international cooperation to reduce other threats to flesh-footed shearwater (predation by introduced mammals, plastic pollution and climate change), including through research, knowledge sharing and capacity building.

7.2 Potential risks of the amendment

None identified.

7.3 Intention of the proponent concerning development of an Agreement or Concerted Action

New Zealand and Australia have submitted a proposal for a Concerted Action to be considered alongside this proposal.

8. Range States

CMS Parties with jurisdictions within range of species: Australia, Fiji, France, New Zealand, Samoa.

CMS non-Party Range States: Kiribati, Japan, Marshall Islands, Russian Federation, United States of America, Tonga, Tuvalu, Vanuatu.

Additional CMS Parties with flagged vessels that fish within range of species²: Australia, Chile, Cook Islands, Ecuador, European Union, France, India, Iran (Islamic Republic of), Kenya, Maldives, Mauritius, New Zealand, Peru, Portugal, Philippines, Seychelles, South Africa, Spain and Sri Lanka.

Additional CMS non-Party Range States with flagged vessels that fish within range of species: Canada, China, Taiwan Province of China, El Salvador, Federated States of Micronesia, Indonesia, Japan, Kiribati, Republic of Korea, Malaysia, Marshall Islands, Nauru, Papua New Guinea, Russian Federation, Singapore, Solomon Islands, Tanzania, Tonga, Tuvalu, United States of America, Vanuatu.

9. Consultations

New Zealand, Australia and France worked collaboratively to develop this listing proposal.

The following CMS Parties have been consulted on this listing proposal: Chile, Cook Islands, Ecuador, European Union, Fiji, France, India, Iran (Islamic Republic of), Kenya, Maldives, Mauritius, New Zealand, Peru, Portugal, Philippines, Samoa, Seychelles, South Africa, Spain and Sri Lanka.

Birdlife International and the South Pacific Regional Environment Programme (SPREP) were also consulted.

10. Additional remarks

Acting now to improve co-ordinated action in addressing the threats to flesh-footed shearwater is vital to prevent a worsening in their conservation status. There will also be spill-over benefit for numerous other seabird species in taking action to address key threats such as fisheries bycatch.

² Based on geographic range of species and vessel registers of relevant RFMOs

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ANNEX

Perspectives of the hapū (sub-tribes) Ngā Mahanga and Ngāti Tairi (Ngā Mahanga a Tairi)**Letter of Support of the Inclusion of Toanui/Flesh-footed Shearwater on Appendix II of CMS**

Toanui, or Flesh-footed Shearwaters (*Ardenna carneipes*), are a taonga (treasure) species of deep cultural and ecological significance to Ngā Mahanga a Tairi. Their presence, particularly on Motumahanga Island within the Ngā Motu/Sugar Loaf Islands Marine Protected Area, reflects the enduring relationship between our Iwi (tribe) and the coastal ecosystems we have long protected as kaitiaki (guardians).

Whakapapa and Connection to Place

Toanui are not just seabirds they are carriers of whakapapa (genealogy). Their seasonal return to Motumahanga Island is a reminder of the cyclical rhythms of nature that our tūpuna (ancestors) observed and respected. These manu (birds) are woven into our stories, our seasonal calendars, and our responsibilities as tangata whenua (people of the land). Their nesting grounds are sacred spaces, where the mauri (life force) of the land and sea converge.

Motumahanga Island itself is a place of ancestral importance. It is part of our rohe (tribal territory), and its ecological health reflects our cultural wellbeing. The increase in Toanui burrows from 100 in 1989/90 to over 500 in 2018/19 is a sign of ecological recovery, but also a testament to the success of our kaitiakitanga (guardianship). This resurgence is linked to the establishment of the Tapuae Marine Reserve, which Ngā Mahanga a Tairi helped create in 2008 to protect marine biodiversity and support scientific research.

Kaitiakitanga and Mātauranga Māori

Our role as kaitiaki (guardians) is grounded in mātauranga Māori (Māori knowledge system) a body of knowledge that includes environmental observation, spiritual connection, and intergenerational responsibility. Toanui are indicators of ecosystem health. Their wellbeing reflects the state of the moana (sea or ocean), the abundance of kai moana (seafood), and the integrity of our coastal habitats.

The protection of Toanui must be guided by tikanga Māori (traditional customs and protocols). This includes respecting their nesting sites, monitoring their populations, and advocating for their survival across their migratory range. The inclusion of Toanui on Appendix II of CMS provides an international platform to uphold these values and ensure that indigenous perspectives are central to conservation efforts.

Cultural Impacts of Environmental Threats

The threats facing Toanui fisheries, including bycatch, plastic pollution, climate change, and introduced predators are not just ecological issues. They are cultural crises. Each Taonga (treasure) lost to bycatch is a loss to our whakapapa (genealogy). Each burrow flooded by extreme weather is a disruption to the seasonal rhythms that guide our tikanga (traditional customs and protocols).

Plastic pollution, in particular, is a desecration of the sacred relationship between tangata whenua (people of the land) and the moana (sea or ocean). The ingestion of plastics by Toanui, observed in colonies such as Ohinau and Lord Howe Island, is a symptom of a global environmental failure. For Ngā Mahanga a Tairi, this pollution is a violation of the principles of rangatiratanga (self-determination) and kaitiakitanga (guardianship).

Climate change further threatens the stability of nesting sites. Increased storm events and habitat erosion, as seen in recent breeding seasons, reduce reproductive success and challenge our ability to maintain traditional knowledge systems. These impacts are felt not only by the birds but by our people, whose identity is tied to the land and sea.

The Importance of International Recognition

The inclusion of Toanui on Appendix II of CMS is a vital step toward international recognition of their vulnerability and the need for coordinated action. It affirms the importance of indigenous knowledge and leadership in conservation. It also supports the development of Concerted Actions that address key threats and promote collaboration across jurisdictions.

For Ngā Mahanga a Tairi, this listing is an opportunity to elevate our voice in global conservation discourse. It ensures that our values whakapapa (genealogy), kaitiakitanga (guardianship), and mātauranga Māori (Māori knowledge system) are reflected in the management of migratory species. It also strengthens our ability to advocate for the protection of Toanui across their full migratory range.

Conclusion

Toanui are a living embodiment of the relationship between Ngā Mahanga a Tairi and our coastal environment. Their survival is intertwined with our cultural identity, our responsibilities as kaitiaki (guardians), and the health of our rohe (tribal area). We strongly support the proposal to include Toanui on Appendix II of CMS and urge all Parties to recognise the cultural significance of this species to mana whenua.

Their protection is not only a matter of ecological urgency it is a matter of cultural survival.

Te Reo Māori Glossary

Te Reo Māori	English Translation
Toanui	Flesh-footed Shearwater (<i>Ardenna carneipes</i>)
Ngā Mahanga a Tairi	Name of the mana whenua hapū (tribal group)
Mana whenua	Indigenous group of people with ancestral genealogy authority over a particular tribal area with ongoing guardianship.
Kaitiaki	Guardian or steward of the environment
Kaitiakitanga	Guardianship; the Māori ethic of environmental stewardship
Whakapapa	Genealogy; ancestral lineage connecting people to land, sea, and species
Mauri	Life force or essence
Taonga	Treasure; something highly prized, often of cultural or spiritual significance
Tikanga Māori	Māori customs and protocols
Rohe	Tribal area or region
Moana	Ocean or sea
Whenua	Land
Tūpuna	Ancestors
Mātauranga Māori	Māori knowledge systems, including traditional ecological knowledge
Rangatiratanga	Sovereignty, self-determination, chiefly authority
Kai moana	Seafood
Tapuae Marine Reserve	A marine protected area established with support from Ngā Mahanga a Tairi
Ngā Motu	The Sugar Loaf Islands (off the coast of Taranaki, NZ)
Motumahanga	One of the Sugar Loaf Islands; key nesting site for Toanui
Tangata whenua	People of the land; Māori with ancestral ties to a particular place
Mokopuna	Grandchildren; future generations