

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Thirteenth Meeting of the Advisory Committee <i>Edinburgh, United Kingdom, 22 – 26 May 2023</i></p> <p>Report of the Population and Conservation Status Working Group</p> <p><i>Population and Conservation Status Working Group</i></p>
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Seventh Population and Conservation Status Working Group Meeting

Edinburgh, United Kingdom, 19 May 2023

1. WELCOME AND OPENING REMARKS

This report outlines progress during the intersessional period against the Work Programme of the Population and Conservation Status Working Group (hereafter PaCSWG or WG), agreed at the ACAP Advisory Committee (AC) meeting in 2021 (AC12), and approved by the Seventh Session of the Meeting of the Parties (MoP7) in 2022. The report also reflects discussions and recommendations resulting from the Seventh Meeting of the Population and Conservation Status Working Group (PaCSWG7) held on 19 May 2019 in Edinburgh, United Kingdom.

2. WORKING GROUP MEMBERSHIP AND INTRODUCTION

The convenors thanked WG members and observers for attending the meeting. Participants welcomed Caroline Fox as a new member of the WG. Current PaCSWG membership and PaCSWG7 meeting participants are listed in **ANNEX 1**.

3. ADOPTION OF THE AGENDA

The WG accepted the proposed agenda and meeting documents (**PaCSWG7 Doc 01** and **PaCSWG7 Doc 02**). Several new items were proposed for discussion under Any Other Business.

4. PROGRESS REPORTS

The Secretariat provided an update on the ACAP database, thanked site editors for providing data, and noted its increased visibility on the updated ACAP website. The WG was asked for feedback and suggestions for further improvements. PaCSWG7 highlighted the importance of the data for progressing the work of the Agreement.

4.1 Updates and reviews of ACAP Species Assessments

PaCSWG7 noted the importance of the ACAP Species Assessments, and their wide and immediate application to processes such as IUCN Red Listing updates and fisheries certification schemes and other assessments. MoP7 had also attached great priority to this work. PaCSWG7 noted that updates of the ACAP Species Assessments have been delayed. PaCSWG7 discussed different approaches to ensure timely updates, and agreed to the re-establishment of the Species Assessments Coordinating Group comprising the Working Group Convenors, ACAP Science Officer and Communications Adviser to oversee the process. The Coordinating Group will be tasked with identifying lead editors for individual species assessments and a schedule for delivery, taking account of any potential capacity issues in production of maps and translations. Leads could also be asked to assist with ongoing updates to the assessments. Other WG members offered to assist with updates, including sub-editing, to improve consistency. Barry Baker, Mark Tasker, Megan Tierney,

Richard Phillips, Igor Debski and Rob Crawford offered to be lead editors or to assist with identifying others with appropriate expertise, or to support the revisions by providing information.

The WG agreed that priority be given to assessments that had already been partially updated, and species that included an ACAP High Priority Population, then proceeding with updates according to IUCN threat status from Critically Endangered to Least Concern. It was suggested the assessments be produced in word accessible formats (e.g. to assist the vision impaired). BirdLife International advised that the level of funding agreed previously for the production of distribution maps would need to be increased. The WG agreed to ask the AC to take this into consideration when reviewing the allocation of funds for the Work Programme.

RECOMMENDATIONS TO THE ADVISORY COMMITTEE

PaCSWG recommends that the Advisory Committee:

1. Endorse the re-establishment of the Species Assessments Coordinating Group to oversee the updates of the ACAP Species Assessments.
2. Ensure that adequate financial resources are made available for this important work.

5. POPULATION STATUS AND TRENDS

5.1. Population trends of ACAP species

The PaCSWG Convenors and Vice-convenor acknowledged the huge effort required to maintain seabird population monitoring programmes and thanked all those that are involved.

PaCSWG7 Inf 01 reported on a 12-year population assessment of the White-capped Albatross *Thalassarche steadii* at the Auckland Islands. It recommended ongoing annual monitoring to help determine potential impacts of high levels of seabird bycatch across multiple fisheries.

PaCSWG7 Inf 09 reported on the population of Northern Royal Albatross *Diomedea sanfordi* at the Chatham Islands. The population decreased considerably after the mid-1990s, but now appears to be stable.

PaCSWG7 Inf 10 reported a recent decline in annual survival of Buller's Albatross *Thalassarche bulleri* at the Snares, despite the stable population trend, highlighting the importance of demographic studies for diagnosing drivers of population change.

PaCSWG7 Inf 11 presented results of a recent survey of Southern Royal Albatross *Diomedea epomophora* across a limited area on Campbell Island, which suggested a potentially major population decrease. The WG noted that further surveys are clearly required. PaSCWG7

recommended that the term 'cohort' be avoided when reporting or interpreting annual changes in the number of breeding adults in biennial breeding species since this usually refers to juveniles.

PaCSWG7 Inf 15 provided an updated estimate of burrow occupancy and number of breeding pairs of Pink-footed Shearwater *Ardenna creatopus* on Isla Mocha, Chile, using different analytical methods. The new estimate was much higher than previous values but reflected improved methodology rather than an increase in the breeding population.

PaCSWG7 Inf 16 examined genetic divergence in Shy *Thalassarche cauta* and White-capped *T. steadi* Albatrosses, confirming that these species should continue to be treated and managed separately.

6. THREATS

6.1 Updates on management of land-based threats

Information on management responses to the threats listed in the ACAP database is summarised in **ANNEX 2**. Progress was reported on the Gough Island and Marion Island restoration programmes (see below), and on eradicating House Mice from Midway Atoll in 2023 and rats from Wake Atoll planned for 2024. PaCSWG7 highlighted the high conservation value of these eradication and restoration programmes, welcomed those recently announced and thanked everyone involved in these projects.

PaCSWG7 Inf 05 provided a report on the Mouse-Free Marion (MFM) Project which will greatly improve the conservation status of its seabird populations, (including several ACAP species) through the removal of the invasive House Mouse from the island. The MFM Project is currently in the planning and preparatory phase. PaCSWG7 recognised that this is a key project at a major global breeding site and urged all who could support the work to do so.

PaCSWG7 Inf 06 reported on efforts to eradicate invasive House Mice from Gough Island. Despite careful planning, the project was unsuccessful, and an independent review has been commissioned to identify and assess possible reasons and make recommendations for a second eradication attempt.

PaCSWG7 Inf 07 reported on a study supported by an ACAP Small Grant that analysed the population trajectory of the Tristan Albatross *Diomedea dabbenena* through an integrated population model under different scenarios. The study concluded that House Mouse eradication is necessary to halt the ongoing population decrease.

PaCSWG7 Inf 08 examined the contrasting impacts of an exceptionally violent storm on survival in two colonies of Black-browed Albatrosses *Thalassarche melanophris*, underlining the value of long-term demographic data.

PaCSWG7 Inf 13 reported that artificial light pollution in Chile motivated joint work by a diverse group of stakeholders to mitigate this threat. Actions to date include updating the Light Pollution Emission Standard, and developing conservation and management plans for seabirds, including the Pink-footed Shearwater *A. creatopus*.

6.2 Pollutants, including plastics and other marine debris

PaCSWG7 Doc 04 described research that evaluated plastic ingestion in 17 seabirds, including ACAP-listed species collected on the coast of Brazil and Argentina.

PaCSWG7 Inf 03 quantified the presence of three phthalate esters in the uropygial gland of 16 seabird species and concluded that concentrations were not a reliable proxy for plastic ingestion.

PaCSWG7 discussed the impact of plastic ingestion in seabirds. Attention was drawn to a recent Australian study in Flesh-footed Shearwater *Ardenna carneipes* which found that the presence of plastics in the gut was associated with scarring of intestinal mucosa and submucosa (termed 'Plasticosis'). Naturally-occurring pumice did not affect the birds' gut. PaCSWG7 noted that although ingested plastic can be a problem for individual birds, there is scant evidence of population-level impacts.

PaCSWG7 noted that fishing vessels are an important source of the plastic waste ingested by seabirds. Negotiation on the development of a global plastics treaty is currently underway and may have implications across the entire supply chain. PaCSWG7 discussed the development of a fact sheet on plastic pollution, which could be facilitated by the extensive literature addressing this issue for Northern Fulmar *Fulmarus glacialis*. PaCSWG7 noted that the theme for World Albatross Day 2023 is 'Plastic Pollution'.

6.3 Other threats

Three papers on the impact of Offshore Wind Farm Infrastructure on albatrosses and petrels had been presented at the Joint SBWG/PaCSWG meeting (**SBWG11/PaCSWG7 Doc 03**, **SBWG11/PaCSWG7 Inf 01**, and **SBWG11/PaCSWG7 Inf 09**). The Working Group acknowledged the seriousness of this emerging threat for ACAP species. The substantive discussion on this topic is reflected in the report of the joint meeting (**AC13 Doc 12**).

RECOMMENDATIONS TO THE ADVISORY COMMITTEE

PaCSWG recommends that the Advisory Committee:

1. Endorse and support the MFM Project, which aims to achieve a more favourable conservation status for Marion Island and its globally important seabirds, including eight ACAP-listed species.
2. Encourage research assessing the exposure to, and incidence and impacts of plastics and microplastics in the marine environment on ACAP species.

7. DATA GAPS

PaCSWG7 Inf 02 reported on the use of bioacoustic techniques for measuring colony attendance of White-chinned Petrel *Procellaria aequinoctialis*. This was a cost-effective census method, and may help to overcome some of the challenges of monitoring population sizes and trends of nocturnal, burrow-nesting seabirds.

7.1. Review of key gaps in population data

PaCSWG reviewed tables that summarise data availability and a variety of data gaps. The Science Officer thanked all Parties and site custodians for submission of updated information used to generate **Tables 1, 2 and 3**.

Data on population size were unavailable for ten important populations at Island Group level (>5% of global breeding pairs) in the past ten years (**Table 1**). No populations have been added to this list since PaCSWG6. Two gaps have recently been filled, for Pink-footed Shearwater *A. creatopus* on Isla Mocha (**PaCSWG7 Inf 15**) and for Grey Petrel *Procellaria cinerea* on Antipodes Islands.

Table 1. Island groups that comprise at least 5% of the species' total global breeding pairs, which have not been monitored at any site within the given island group in at least the last 10 years (since 2012) or the data are not yet available. Island groups added since PaCSWG6 are highlighted.

Jurisdiction	Island Group	Species	Population estimate for Island Group (annual breeding pairs)	% of known global population	Latest year of data at any site within Island Group
Australia	Heard and McDonald Islands	<i>Macronectes giganteus</i>	3,500	8	2004
	westernmost breeding population	<i>Phoebastria albatrus</i>	52	6	2002
Disputed	South Georgia (Islas Georgias del Sur) ¹	<i>Procellaria aequinoctialis</i>	669,443*	49	2007
France	Kerguelen	<i>Phoebetria palpebrata</i>	4,000	26	1987
France	Crozet	<i>Procellaria cinerea</i>	5,500	7	2005
New Zealand	Campbell Islands	<i>Phoebetria palpebrata</i>	1,658	11	1996
South Africa	Prince Edward Islands	<i>Thalassarche carteri</i>	7,000	21	2009
United Kingdom	Gough	<i>Procellaria cinerea</i>	10,000-25,000	23	2001
United Kingdom	Tristan da Cunha	<i>Thalassarche chlororhynchos</i>	28,350	84.25	2010
United Kingdom	Tristan da Cunha	<i>Phoebetria fusca</i>	3,157	26.08	2010

* Including 4 regions; north, south, west and north-east mainland:

¹ A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sándwich del Sur) and the surrounding maritime areas

The Humane Society International (HSI) noted that there are apparent discrepancies between methods used to estimate size of the westernmost breeding population of the Short-tailed Albatross *Phoebastria albatrus*, and that ACAP might prefer to defer status revision until after the species Recovery Plan team next evaluates evidence and decides on conservation status – planned for 2025. The PaCSWG thanked HSI for this information and suggested that a paper on the evaluation be presented at PaCSWG8.

Recent information is lacking for 20 populations at breeding sites holding >10% of global numbers (**Table 2**). Two additional populations have been added since PaCSWG6: Black-footed Albatross *Phoebastria nigripes* and Laysan Albatross *P. immutabilis* on Laysan Island. As for Island Groups above, two gaps at the breeding site level have recently been filled, for Pink-footed Shearwater *A. creatopus* on Isla Mocha and for Grey Petrel *P. cinerea* on Antipodes Islands.

Data gaps remain largely for Island Groups or breeding sites that are logistically difficult to access, and for species that are very challenging to census. In addition, PaCSWG7 recognised that the COVID-19 pandemic had affected the implementation or continuation of monitoring programmes.

Three breeding sites with demographic information for the Pink-footed Shearwater *A. creatopus* (juvenile survival, breeding success) were added to **Table 3** since it was considered at PaCWG6. Data continue to be lacking on breeding success and both adult and juvenile survival for Spectacled Petrel *P. conspicillata*, on adult survival for the Pink-footed Shearwater *A. creatopus*, and on juvenile survival or breeding success for Indian Yellow-nosed Albatross *Thalassarche eremita*, Salvin's Albatross *T. salvini* and White-capped Albatross *T. steadi*.

Table 2. Sites with >10% of species' global breeding pairs where population estimate has not been conducted in at least the last 10 years, or the data are not yet available (i.e. latest survey = 2012 or earlier) (excludes sites where part-site/study colony counts have been conducted). Sites added since PaCSWG6 are highlighted.

Jurisdiction	Island Group	Breeding Site	Species	Population Estimate at breeding site (annual breeding pairs)	% of total known global population	Survey Accuracy	Latest year of population data for the site or part-site
Chile	Islas Diego Ramirez	Isla Bartolome	<i>Thalassarche chrysostoma</i>	10880	13.5	High	2003
Disputed	South Georgia (Islas Georgias del Sur) ¹	Bird Island (SGSSI (IGSISS))	<i>Macronectes halli</i>	2281	21.5	High	2007
Disputed	South Georgia (Islas Georgias del Sur) ¹	Northwest	<i>Procellaria aequinoctialis</i>	146545	12.2	Medium	2007
Disputed	South Georgia (Islas Georgias del Sur) ¹	Nunez	<i>Procellaria aequinoctialis</i>	193838	16.1	Medium	2007
France	Crozet	Ile de l'Est	<i>Phoebetria fusca</i>	1300	10.7	Unknown	1984
France	Kerguelen	Golfe du Morbihan [#]	<i>Phoebetria palpebrata</i>	4000	26-36		1987
New Zealand	Campbell Islands	Campbell Island	<i>Diomedea epomophora</i>	7855	99.2	High	2008
New Zealand	Campbell Islands	Campbell Island	<i>Phoebetria palpebrata</i>	1600	10.2	Low	1996
South Africa	Prince Edward Islands	Prince Edward Island	<i>Thalassarche carteri</i>	7000	20.6	High	2009
South Africa	Prince Edward Islands	Prince Edward Island	<i>Diomedea exulans</i>	1800	19.4	High	2009
South Africa	Prince Edward Islands	Prince Edward Island	<i>Phoebetria fusca</i>	1210	10	High	2009
Spain	Balearic Archipelago	Cabrera	<i>Puffinus mauretanicus</i>	449	14.1	Low	2008
Spain	Balearic Archipelago	Mallorca	<i>Puffinus mauretanicus</i>	900	28.3	Low	2009
United Kingdom	Gough	Gough Island	<i>Procellaria cinerea</i>	10000-25000	13-31	Unknown	2001

Jurisdiction	Island Group	Breeding Site	Species	Population Estimate at breeding site (annual breeding pairs)	% of total known global population	Survey Accuracy	Latest year of population data for the site or part-site
United Kingdom	Tristan da Cunha	Nightingale	<i>Thalassarche chlororhynchos</i>	4000	11.9	Low	2007
United Kingdom	Tristan da Cunha	Tristan da Cunha	<i>Thalassarche chlororhynchos</i>	16000-30000	48-89	Low	1974
United Kingdom	Tristan da Cunha	Tristan da Cunha	<i>Phoebastria fusca</i>	2000-3000	16-25	Unknown	1974
USA	Hawaii	Laysan Island	<i>Phoebastria nigripes</i>	24565	34.6	High	2012
USA	Hawaii	Laysan Island	<i>Phoebastria immutabilis</i>	134835	19.1	Medium	2012

figure is for all Kerguelen

¹ A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sándwich del Sur) and the surrounding maritime areas

Table 4: Availability of **demographic information** for all ACAP species (including data collected but not yet analysed).

Species	Number of sites	Number of Island Groups	Adult survival data Sites	Juvenile survival data Sites	Breeding success data sites
<i>Diomedea amsterdamensis</i>	1	1	Plateau des Tourbieres	Plateau des Tourbieres	Plateau des Tourbieres
<i>Diomedea antipodensis</i>	6	4	Antipodes Island Adams Island	Antipodes Island Adams Island	Antipodes Island Adams Island
<i>Diomedea dabbenena</i>	2	2	Gough Island	Gough Island	Gough Island
<i>Diomedea epomophora</i>	4	2	Enderby Island Campbell Island	Campbell Island	Enderby Island Campbell Island
<i>Diomedea exulans</i>	39	5	Macquarie Island Ile de la Possession Bird Island (SGSSI (IGSISS)) ¹ Marion Island Courbet Peninsula	Macquarie Island Ile de la Possession Courbet Peninsula Marion Island Bird Island (SGSSI (IGSISS)) ¹	Macquarie Island Ile de la Possession Bird Island (SGSSI (IGSISS)) ¹ Marion Island Albatross Island (SGSSI (IGSISS)) ¹ Prion Island (SGSSI (IGSISS)) ¹ Courbet Peninsula
<i>Diomedea sanfordi</i>	5	3	The Forty-fours Taiaroa Head	Taiaroa Head	The Big Sister The Forty-fours The Little (Middle) Sister Taiaroa Head
<i>Phoebastria albatrus</i>	2	2	Torishima Mukojima*	Mukojima*	Torishima Mukojima*
<i>Phoebastria immutabilis</i>	17	5	Midway Atoll Laysan Island French Frigate Shoals Kaua'i O'ahu	Midway Atoll Laysan Island French Frigate Shoals Kaua'i O'ahu	Midway Laysan French Frigate Shoals O'ahu

Species	Number of sites	Number of Island Groups	Adult survival data Sites	Juvenile survival data Sites	Breeding success data sites
<i>Phoebastria irrorata</i>	2	2	Isla Espanola	Isla Espanola	Isla Espanola
<i>Phoebastria nigripes</i>	15	4	Midway Atoll	Midway Atoll	Midway
			French Frigate Shoals	French Frigate Shoals	Laysan
			Laysan Island	Laysan Island	French Frigate Shoals
<i>Phoebetria fusca</i>	15	6	Ile de la Possession	Ile de la Possession	Ile de la Possession
					Marion Island
					Gough Island
<i>Phoebetria palpebrata</i>	73	9	Ile de la Possession	Macquarie Island	Macquarie Island
			Jeanne d'Arc Peninsula	Jeanne d'Arc Peninsula	Ile de la Possession
					Campbell Island
					Marion Island
					Bird Island (SGSSI (IGSISS)) ¹
					Jeanne d'Arc Peninsula
<i>Thalassarche bulleri</i>	10	4	North-East Island	North-East Island	North-East Island
			The Little (Middle) Sister		Great Solander Island
<i>Thalassarche carteri</i>	6	5	Falaise d'Entrecasteaux	Falaise d'Entrecasteaux	Falaise d'Entrecasteaux
<i>Thalassarche cauta</i>	3	1	Albatross Island (AU)	Albatross Island (AU)	Albatross Island (AU)
<i>Thalassarche chlororhynchos</i>	6	2	Gough Island	Gough Island	Gough Island
			Tristan da Cunha		Inaccessible Island
					Tristan da Cunha
<i>Thalassarche chrysostoma</i>	29	8	Macquarie Island	Macquarie Island	Macquarie Island
			Campbell Island	Campbell Island	Campbell Island
			Bird Island (SGSSI (IGSISS)) ¹	Bird Island (SGSSI (IGSISS)) ¹	Bird Island (SGSSI (IGSISS)) ¹
			Marion Island		Marion Island

Species	Number of sites	Number of Island Groups	Adult survival data Sites	Juvenile survival data Sites	Breeding success data sites
<i>Thalassarche eremita</i>	1	1	The Pyramid	No data	No data
<i>Thalassarche impavida</i>	2	1	Campbell Island	Campbell Island	Campbell Island
<i>Thalassarche melanophris</i>	65	14	Macquarie Island	Macquarie Island	Macquarie Island
			Jeanne d'Arc Peninsula	Jeanne d'Arc Peninsula	Jeanne d'Arc Peninsula
			Bird Island (SGSSI (IGSISS)) ¹		Bird Island (SGSSI (IGSISS)) ¹
			New Island		Saunders Island
					New Island
					Steeple Jason
		West Point Island			
		Grave Cove, Dunbar			
<i>Thalassarche salvini</i>	12	4	Toru Islet	No data	No data
			Proclamation Island		
<i>Thalassarche steadi</i>	5	3	Auckland Island	No data	Auckland Island
			Disappointment Island		
<i>Ardenna creatopus</i>	3	2	No data	Isla Mocha	Isla Mocha
				Isla Santa Clara	Isla Santa Clara
				Isla Robinson Crusoe	Isla Robinson Crusoe
<i>Macronectes giganteus</i>	123	26	Bird Island (SGSSI (IGSISS)) ¹	Bird Island (SGSSI (IGSISS)) ¹	Isla Arce
			Marion Island		Isla Gran Robredo
			Ile de la Possession		Macquarie Island
					Ile de la Possession
					Laurie Island
					Nelson Island
					Marion Island
					Bird Island (SGSSI (IGSISS)) ¹
	Gough Island				

Species	Number of sites	Number of Island Groups	Adult survival data Sites	Juvenile survival data Sites	Breeding success data sites
					Golden Knob (Elephant Cays) Sandy Cay (Elephant Cays) Steeple Jason Anvers Island
<i>Macronectes halli</i>	52	11	Bird Island (SGSSI (IGSISS)) ¹ Marion Island Ile de la Possession	Bird Island (SGSSI (IGSISS)) ¹	Bird Island (SGSSI (IGSISS)) ¹ Macquarie Island Ile de la Possession Marion Island Courbet Peninsula
<i>Procellaria aequinoctialis</i>	78	8	Ile de la Possession Ile Haute Antipodes Island	Ile de la Possession Ile Haute	Ile de la Possession Marion Island Bird Island (SGSSI (IGSISS)) ¹ Ile Haute
<i>Procellaria cinerea</i>	16	9	Golfe du Morbihan	Golfe du Morbihan	Macquarie Island Marion Island Gough Island Golfe du Morbihan
<i>Procellaria conspicillata</i>	1	1	No data	No data	No data
<i>Procellaria parkinsoni</i>	2	1	Great Barrier Island	Little Barrier Island Great Barrier Island	Little Barrier Island Great Barrier Island
<i>Procellaria westlandica</i>	1	1	Punakaiki	Punakaiki	Punakaiki
<i>Puffinus mauretanicus</i>	5	1	Mallorca Ibiza	Mallorca Ibiza	Mallorca Cabrera Menorca Ibiza

* Translocated population

¹A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty of the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

The PacSWG reviewed priority monitoring programmes identified for each ACAP species by region; recent progress is summarised in **Table 4**. As noted above, the COVID-19 pandemic has affected the implementation or continuation of monitoring programmes.

Table 4. Summary of progress on **regional priority programmes**.

Priority programmes	Progress since AC12 (August 2021)
ANTARCTICA: two species; 50 sites, two of unknown size	
(i) Resurvey Southern Giant Petrel at King George and Nelson Islands, South Shetland Islands	<i>None reported</i>
(ii) Maintain long-term population and productivity monitoring of Southern Giant Petrels at Signy Island, South Orkney Islands.	<i>Maintained all programmes</i>
ARGENTINA: one species (Southern Giant Petrel) at four sites, population size known for all sites but no recent breeding pairs trend data; no survival data; potential impact of introduced species at Isla de los Estados	
(i) Maintain population and productivity monitoring at Isla Arce and Isla Gran Robredo.	<i>Maintained programme</i>
(ii) Resurvey the two sites at Isla de los Estados.	<i>No progress</i>
AUSTRALIA: eight species at 17 sites in three island groups; 18% of populations of unknown size.	
(i) Maintain long-term demographic, productivity or population monitoring at Macquarie Island (seven ACAP species) and Tasmania (Shy Albatross).	<i>None reported</i>
(ii) Resurvey Shy Albatross at Mewstone	<i>None reported</i>
(iii) Resurvey Black-browed and Light-mantled Albatrosses at Heard Island.	<i>None reported</i>
(iv) Resurvey Black-browed Albatrosses at Bishop and Clerk Islands.	<i>None reported</i>
CHILE: four species at 36 sites in nine island groups; no demographic data.	
(i) Begin long-term demographic monitoring of Black-browed and Grey-headed Albatrosses at minimum of one island group.	<i>None reported</i>
(ii) Resurvey all island groups.	<i>None reported</i>
(iii) Re-survey Southern Giant Petrel at Isla Noir.	<i>None reported</i>
(iv) Survey Pink-footed Shearwater on Isla Mocha and on at least one of the islands in Juan Fernández archipelago	2016 Isla Mocha 2022 Juan Fernández Archipelago
(v) Initiate a long-term demographic monitoring programme for Pink-footed Shearwater in at least one the island groups where it breeds	<i>None reported</i>

Priority programmes	Progress since AC12 (August 2021)
NORTH PACIFIC: two species at two sites; current population trends unknown; no survival data.	
(i) Confirm breeding and begin long-term population monitoring of Short-tailed Albatross at Minami-Kojima in the western-most current breeding site.	<i>None reported</i>
DISPUTED – SOUTH ATLANTIC: seven species at 232 sites; 34% of populations of unknown size; steep declines in Wandering, Black-browed and Grey-headed Albatrosses, and White-chinned Petrel; possible decline in Light-mantled Albatross.	
(i) Maintain long-term demographic or productivity monitoring at Bird Island, South Georgia (Islas Georgias del Sur) ¹ (seven ACAP species).	<i>Maintained all programmes</i>
(ii) Maintain long-term population (3 species) and productivity monitoring (1 species) at Prion island, South Georgia (Islas Georgias del Sur) ¹ (three ACAP species).	<i>Maintained all programmes.</i>
(iii) Maintain White-chinned Petrel population monitoring at six sites at South Georgia (Islas Georgias del Sur) ¹ .	<i>Maintained at five sites. Demographic monitoring is planned to start at Bird Island in 2023/24</i>
(iv) Maintain long-term demographic monitoring of Black-browed Albatross at two sites in the Falkland Islands (Islas Malvinas) ¹ .	<i>Maintained all programmes</i>
(v) Maintain long-term population monitoring of Black-browed Albatrosses elsewhere in the Falkland Islands (Islas Malvinas) ¹ .	<i>10-year island-group-wide aerial census conducted in 2017. Results expected to be published in scientific literature in 2023. Annual monitoring continued at Dunbar and demographic studies continued at New Island.</i>
(vi) Resurvey Southern Giant Petrels at the Falkland Islands (Islas Malvinas) ¹ .	<i>Annual monitoring at selected sites maintained.</i>
(vii) Resurvey all Wandering Albatross, Black-headed Albatross, Grey-headed Albatross breeding sites at South Georgia (Islas Georgias del Sur) ¹ every 10 years	<i>Resurvey of Wandering Albatross, Black-headed Albatross, Grey-headed Albatross planned for 2023-24</i>
NEW Maintain long-term population and productivity monitoring of Northern and Southern Giant Petrels at Cumberland Bay, South Georgia (Islas Georgias del Sur) ¹ .	
ECUADOR: single endemic species (Waved Albatross) at two sites, declining; no juvenile survival data.	
(i) Survey all of Española, Galapagos Islands.	<i>ACAP Small Grant</i>
(ii) Establish demographic monitoring in the interior colonies ('Colonia Central') on Española.	<i>None reported</i>
(iii) Establish long-term population and productivity monitoring at Isla de la Plata.	<i>None reported</i>

Priority programmes	Progress since AC12 (August 2021)
FRANCE: 12 species at 99 sites in three island groups; 20% of populations of unknown size; steep declines in Sooty Albatross and Indian Yellow-nosed Albatross.	
(i) Maintain long-term demographic or population monitoring at Kerguelen (5 species).	<i>Maintained all programmes</i>
(ii) Maintain long-term demographic or population monitoring at Crozet (6 species).	<i>Maintained all programmes</i>
(iii) Maintain long-term demographic or population monitoring at Amsterdam Island (3 species).	<i>Maintained all programmes</i>
(iv) Resurvey; Sooty and Light-mantled Albatross at Ile de l'Est, Crozet and at Kerguelen; Northern and Southern Giant Petrels at Cochons and Ile de l'Est, Crozet; White-chinned Petrel at Possession Island, Crozet, and; Grey Petrel at Kerguelen	<i>None reported</i>
JAPAN: three species; current trend, adult survival and productivity unknown for four populations.	
(i) Establish long-term demographic monitoring at all sites.	<i>None reported</i>
MEXICO: one species (Laysan Albatross) at four sites; no trend or demographic data.	
(i) Establish demographic monitoring at all sites	<i>None reported</i>
NEW ZEALAND: 16 species (10 endemic) including 98 populations; 27% of populations of unknown size.	
(ii) Survey Salvin's Albatross at Bounty Islands.	<i>All Bounty Islands were surveyed by drone in Nov 2022 and time-lapse cameras were maintained.</i>
(iii) Maintain long-term demographic monitoring of Black Petrel at Great Barrier Island.	<i>Programme maintained</i>
(iv) Maintain long-term demographic monitoring of Antipodean Albatross at Adams Island, Auckland Islands.	<i>Programme maintained</i>
(v) Maintain long-term demographic monitoring of Buller's Albatross at the Snares, and resurvey Solander Islands.	<i>Programme maintained on Snares</i>
(vi) Maintain population monitoring of White-capped Albatross at all sites in the Auckland Islands.	<i>Programme maintained at Disappointment Island</i>
(viii) Collate existing data on Light-mantled Albatross populations and survey at major breeding sites.	<i>Apart from a small sub-colony that was successfully surveyed by drones on the Antipodes, no progress</i>
(ix) Maintain long-term demographic monitoring of Antipodean Albatross at Antipodes Island	<i>Programme maintained</i>
(x) Survey southern royal albatross at Campbell Island.	<i>Planned surveys in Feb 2023 were limited to a one-day survey due to cyclone.</i>
NEW maintain long-term demographic monitoring of Westland Petrels at Punakaiki	<i>Long-term demographic programme maintained</i>

Priority programmes	Progress since AC12 (August 2021)
SOUTH AFRICA: 9 species including 17 populations; 18% of populations of unknown size; no survival data for 13 populations.	
(i) Maintain long-term population monitoring of Sooty and Light-mantled Albatrosses at Marion Island.	<i>None reported</i>
(ii) Survey White-chinned and Grey Petrels at Marion and Prince Edward Islands.	<i>None reported</i>
(iii) Maintain long-term demographic monitoring of Wandering and Grey-headed Albatrosses at Marion Island.	<i>None reported</i>
(iv) Maintain intermittent population monitoring	<i>None reported</i>
SPAIN: 1 species in one archipelago (Balearics), five island groups within a main archipelago (Balearics).	
(i) Establish and maintain long term monitoring programmes in all the major island groups, including ongoing initiatives in Dragonera/Sa Cella (Mallorca group) and Conillera/Bosc (Ibiza). Ensure that these ongoing programmes collect the relevant information necessary to assess demographic trends.	<i>None reported</i>
(ii) Recover the available information collected in the last 12 years on behalf of the local administration	<i>None reported</i>
(iii) Update population information for the whole archipelago, and investigate the potential existence of unknown/not confirmed breeding sites	<i>None reported</i>
UNITED KINGDOM: 6 species including 16 populations on two island groups	
(i) Maintain long-term demographic monitoring of Tristan and Atlantic Yellow-nosed Albatrosses and Southern Giant Petrels at Gough Island.	<i>Maintained all programmes, but ringing discontinued at the end of 2021 due to licencing conditions.</i>
(ii) Maintain long-term demographic monitoring of Atlantic Yellow-nosed Albatross at Tristan and Nightingale islands.	<i>None reported</i>
(iii) Maintain intermittent population monitoring of Sooty Albatross at Gough Island.	<i>Nest monitoring and counts of coastal cliffs maintained.</i>
(iv) Maintain intermittent population monitoring of Spectacled Petrel at Inaccessible Island.	<i>None reported</i>
(v) Establish intermittent population monitoring of Sooty Albatross at Tristan Island.	<i>None reported</i>
(vi) Survey Atlantic Yellow-nosed Albatross at Tristan Island.	<i>None reported</i>
(vii) Maintain population and productivity monitoring in study plots of Grey Petrel at Gough Island.	<i>Study plot monitoring continued – breeding success only.</i>
(viii) Confirm breeding of Grey Petrel at Inaccessible and Tristan islands.	<i>None reported</i>

Priority programmes	Progress since AC12 (August 2021)
UNITED STATES: two species, 25 populations, all of known size; few demographic data.	
(i) Maintain long-term demographic monitoring at several sites.	<i>None reported</i>
(ii) Survey the five breeding sites where not currently monitored, and at all sites at five-year intervals.	<i>None reported</i>

¹A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty of the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

7.2. Review of key gaps in tracking data

The PaCSWG reviewed recent progress in the priority tracking programmes identified for each ACAP species by region (**Table 5**).

Table 5. Summary of progress on regional tracking priorities.

Priorities	Progress since AC12 (August 2021)
ARGENTINA –Southern Giant Petrels (non-breeding adults and juveniles) at Isla Arce and Isla Gran Robredo.	GPS Solar Powered loggers deployed in January 2022 (breeding seasons) on 10 adults from Isla Arce. Tracking included the last and the first months of the breeding and non-breeding periods, respectively.
NEW Southern Giant Petrels (breeding and non-breeding adults) at Isla Arce and/or Isla Gran Robredo.	
AUSTRALIA - Shy Albatross (juveniles) in Tasmania; juveniles of all albatross species at Macquarie Island.	
CHILE	
i) Juvenile and nonbreeding Black-browed and Grey-headed Albatrosses at all island groups, and particularly at Diego Ramirez; tracking of adults during all breeding stages from Islands Groups other than Diego Ramirez;	
ii) tracking of Southern Giant Petrels at Isla Noir.	
DISPUTED i) Black-browed and Grey-headed Albatrosses (juveniles) at South Georgia (Islas Georgias del Sur)¹	<i>PTTs deployed on juvenile Black-browed Albatrosses in May-June 2023. Now 2 years of data from both species. Grey-headed Albatross data published (Joint SBWG11 PaCSWG7 Inf_06 and Joint</i>

Priorities	Progress since AC12 (August 2021)
	<i>SBWG11 PaCSWG7 Inf 07). Remove from list</i>
iv) Wandering Albatross pre-breeders and deferring adults during the breeding season at South Georgia (Islas Georgias del Sur)¹. (High-resolution data reqd. to map overlap with fleets in SW Atlantic)	<i>Papers published (Joint SBWG11 PaCSWG7 Inf 03 and PaCSWG6 Inf 07). Remove from list</i>
i) All ACAP species at South Georgia (Islas Georgias del Sur) ¹ at a site other than Bird Island,.	<i>Breeding-season tracking (with GPS loggers or PTTs) and GLS loggers deployed on Wandering Albatross (Prion Island in 2021/22; GLS retrieved in 2022/23), White-chinned Petrel (Cooper Island in 2021/22, and Cumberland Bay in 2022/23), Northern Giant Petrel and Southern Giant Petrels (Cumberland Bay in 2022/23).</i>
NEW Light-mantled Albatross at Bird Island, South Georgia (Islas Georgias del Sur) ¹ . Limited data suggest population decline.	
ECUADOR	
i) Waved Albatross (juveniles) at Galapagos.	
ii) Waved albatross (breeding adults during the non-breeding season) at Galapagos.	
FRANCE - Grey-headed and Indian Yellow-nosed Albatrosses at Crozet Islands, Grey-headed Albatross at Kerguelen	
JAPAN - Black-footed Albatross at Ogasawara Islands.	
NEW ZEALAND	
iii) Light-mantled Albatross at key sites.	<i>No further progress</i>
NEW Satellite tracking of Southern Royal Albatross from Campbell	<i>Deployments planned during 2023/24</i>
NEW Satellite tracking of Southern Buller's Albatross from Snares and Solander	<i>Deployments planned during 2023/24-2025/26</i>
SOUTH AFRICA - Juveniles of all species at Prince Edward Islands (<i>Phoebetria</i> species higher priority).	

Priorities

Progress since AC12 (August 2021)

SPAIN

(i) Balearic Shearwater juveniles (only pilot study with five birds) and adults in early stages of breeding period. Major effort required in Menorca, where taxonomic status uncertain, influenced by Yelkouan Shearwater *Puffinus yelkouan* (could affect bird movements).

(ii) Tracking of birds captured at sea during breeding season, to assess connectivity with colonies and explore the possible existence of unknown colonies

(iii) Tracking of birds bycaught alive by fishing vessels.

UNITED KINGDOM - Grey Petrel at Gough Island; juveniles of most species at Gough and Tristan da Cunha.

Paper published on Grey Petrel tracking undertaken in 2014-15 from Gough Island published (Joint SBWG11/PaCSWG7 Inf 05)

USA - Black-footed Albatross at Laysan Island.

¹A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty of the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

RECOMMENDATIONS TO THE ADVISORY COMMITTEE

PaCSWG recommends that the Advisory Committee:

1. Encourage ACAP Parties and Range States responsible for breeding populations of ACAP species to implement the priority monitoring programmes to increase current knowledge of their population size, trends and demography;
2. Encourage ACAP Parties and others to undertake the identified priority tracking studies.
3. Encourage data-holders to submit their tracking data to the BirdLife International Seabird Tracking Database to enable multi-species analyses of overlap between ACAP species and fisheries.

8. BEST-PRACTICE GUIDELINES AND OTHER ONLINE RESOURCES

8.1 Updates to existing guidelines and resources

PaCSWG Co-convenor Patricia Serafina noted the range of guidelines and links to external resources on the ACAP website. These guidelines are increasing in scope, and are viewed as a valuable conservation management resource applicable to ACAP species and more broadly. The guidelines can be updated as new information becomes available

8.2. New guidelines on remote sensing (satellite-based and UAVs) monitoring

PaCSWG7 Doc 05 reviewed the use of remote-sensing technologies and image analysis and proposed a guide for implementing terrestrial remote-sensing techniques including for seabird species counting large vertebrates on land, including marine predators that return to land to breed, haul out or roost. Aerial surveys, remote-sensing technologies and image analysis have developed rapidly in recent decades, offering improved accuracy and repeatability, lower costs, speed, expanded spatial coverage, and increased potential for public involvement

PaCSWG7 welcomed the progress in developing these guidelines and their consideration of both the potential of, and challenges associated with different approaches to remote sensing of species, as well as opportunities for future research and method development. PaCSWG7 noted that the scope of the guidelines were broadly based, and there may be merit in considering the specific issues that arise when using such technologies for remote sensing of albatrosses and petrels. PaCSWG agreed to revisit the finalised guide to consider its inclusion as an ACAP Conservation Guideline

The authors invited attendees to provide further feedback on the review following PaCSWG7.

8.3 New guidelines for working with albatrosses and petrels during the on-going high-pathogenicity H5N1 avian influenza outbreak

PaCSWG7 Inf 04 provided an update on the rapid spread of current outbreak of high-pathogenicity H5N1 avian influenza (HPAI) and impact on wild seabirds in southern Africa, Europe and the Americas. The recent southward spread of the virus in the Americas was accompanied by mass mortalities of seabirds and marine mammals across several countries. HPAI poses potential disease risks for ACAP species.

PaCSWG7 welcomed the intersessional development of ACAP Conservation Guidelines (Guidelines for working with albatrosses and petrels during the on-going high pathogenicity H5N1 avian influenza outbreak) in response to the current H5N1 avian influenza (HPAI) outbreak that threatens albatrosses and petrels when aggregating at breeding islands, as well as from incidental introduction by human activities (e.g. bird banding, research activities, tourism).

PaCSWG7 noted that the lack of detection in ACAP-listed species may be due to limited avian influenza surveillance. The taxa are susceptible to infection, even though clinical disease is rare in the absence of high-pathogenicity strains.

PaCSWG7 encouraged ongoing work intersessionally by a task force of relevant experts to update the ACAP Conservation Guidelines about the H5N1 outbreak as new information becomes available about the spread of the outbreak and its potential effects on albatrosses and petrels. Links with other groups developing guidelines on this topic will be important to ensure consistent approaches are developed.

It was agreed that a group of experts on epidemiology, disease risk assessment and management be formed that could advise ACAP on this matter. The group is to include invited experts from several countries and will be responsible for compiling up-to-date information and revising the ACAP guidelines, communicating the risk to decision makers and stakeholders within ACAP, and preparing further documents as necessary. Patricia Serafini will be the PaCSWG lead and will report back to the WG intersessionally and at PaCSWG8.

RECOMMENDATIONS TO THE ADVISORY COMMITTEE

PaCSWG recommends that the Advisory Committee:

1. Note that the ACAP guidelines for working with albatrosses and petrels during the ongoing high-pathogenicity H5N1 avian influenza outbreak will be updated on an ongoing basis as new information becomes available.

9. ACAP FUNDED PROGRAMMES

9.1 Small Grants and Secondments Programmes

AC13 Inf 02 provided a summary of the projects supported by ACAP Small Grants in the 2018 - 2020 rounds, and Secondments supported in 2019 and 2022. The meeting welcomed confirmation from the Secretariat that the newly updated ACAP website design would include a section giving prominence to the outcomes of the Small Grants and Secondment programmes. PaCSWG7 highlighted the fact that at least three papers submitted to this meeting had reported on research supported by ACAP Small Grants, illustrating the value of the Programme. Furthermore, ACAP Secondments and Grants over the years had provided valuable capacity building for ACAP officials and Parties.

The Working Group expressed its thanks to the Secretariat and the Grants Sub-committee for their work on the Small Grants and Secondment Programmes

10. REVIEWS AND INFORMATION

10.1. Global Ocean Observing System (GOOS) update

PaCSWG7 Doc 03 explored opportunities for collaboration between ACAP and the Global Ocean Observing System (GOOS) expert panel on biology and ecosystems. PaCSWG7 discussed the possibilities for ACAP to contribute to this process, noting that GOOS was still

in the process of determining how it would proceed in its next phase, which data would be useful and how these could be shared. The WG agreed to consider collaboration with the GOOS BioEco Panel with the aim of strengthening the network of seabird observations, including of albatrosses and petrels, and of determining how ACAP might usefully and appropriately share relevant data with this project. Patricia Serafini would be the PaCSWG lead on this collaboration.

11. FUTURE WORK PROGRAMME

11.1. Work Programme 2023 - 2025

The Work Programme for 2023 - 2025 (**AC13 Doc 13**) was updated based on discussions during the meeting, to be considered by the Advisory Committee.

12. REPORTING TO AC13

This report was prepared for consideration by the Advisory Committee.

13. ANY OTHER BUSINESS

The PaCSWG Terms of Reference were reviewed, and adjusted to accommodate consideration of the impact of Offshore Wind Farm Infrastructure and other emerging threats to albatrosses and petrels (**ANNEX 3**).

The Working Group discussed ways to promote ACAP at the 7th International Albatross and Petrel Conference to be held in Mexico from 20 to 26 May 2024. Options included offering of a keynote address or other presentations, or proposing a workshop. Dialogue with conference organizers in coming months was encouraged. The WG also discussed ways to better celebrate in 2024 the 20 year anniversary of the entry into force of the Agreement.

RECOMMENDATIONS TO THE ADVISORY COMMITTEE

PaCSWG recommends that the Advisory Committee:

1. Endorse the revised PaCSWG Terms of Reference provided in **ANNEX 3**.

14. CLOSING REMARKS

The PaCSWG Convenors and Vice-convenor thanked those present, and the authors of papers and rapporteurs, for their valuable contributions to the meeting. The Science Officer was thanked for her diligence and commitment to assisting the work of the Working Group during the intersessional period and at the meeting. PaCSWG members and observers, the ACAP Secretariat and ACAP officials were thanked for progressing the work of the PaCSWG during the intersessional period. The Convenors also thanked the hosts, United Kingdom. Sandra Hale and Cecilia Alal were also gratefully acknowledged for their interpretation services as was the sound technician for his assistance. The group thanked the Convenors and Vice-convenor for chairing the meeting.

ANNEX 1. LIST OF MEETING PARTICIPANTS AND NON-ATTENDING PaCSWG MEMBERS

PaCSWG7 MEETING PARTICIPANTS

PaCSWG Members	
Marco Favero	PaCSWG Co-convenor, Instituto de Investigaciones Marinas y Costeras, CONICET-UNMDP, Argentina
Patricia Pereira Serafini	PaCSWG Co-convenor, Brazil
Richard Phillips	PaCSWG Vice-convenor, BAS, United Kingdom
Barry Baker	Institute for Marine and Antarctic Studies (IMAS), Australia
Jonathon Barrington	Department of Climate Change, Energy, the Environment and Water, Australian Antarctic Division, Australia
Ana Carneiro	BirdLife International
Igor Debski	Department of Conservation, New Zealand
Caroline Fox	Environment and Climate Change Canada
Verónica López	Oikonos, Chile
Megan Tierney	Joint Nature Conservation Committee, United Kingdom
Advisory Committee Officials, Members, Representatives and Advisors	
Orea Anderson	Advisor, United Kingdom
Elizabeth Biott	Alternate Representative, United Kingdom
Kristopher Blake	Alternate Representative, United Kingdom
Robert Crawford	Representative, South Africa
Mike Double	AC Chair
Verónica Iriarte	Advisor, United Kingdom
Sebastián Jiménez	Advisor, Uruguay
Andrei Langeloh Roos	Advisor, Brazil
María Andrea Meza	Representative, Peru
Tatiana Neves	AC Vice-chair
Juan Pablo Seco Pon	SBWG Co-viceconvenor
Mark Tasker	Member, United Kingdom/ TWG Convenor
Observers	
Luis Adasme	Instituto de Fomento Pesquero, Chile
Nicola Beynon	Humane Society International

Bernadette Butfield	BirdLife International
Gabriel Canani	AATM-FURG/Projeto Albatroz, Brazil
Dimas Gianuca	BirdLife International
Zoe Jacobs	Independent
Mi Ae Kim	USA
Ed Melvin	University of Washington, USA
Daisuke Ochi	NRIFR, Japan
Jonathan Rutter	University of Oxford
Cristián Suazo	BirdLife International
Desmond Tom	Namibia
Sachiko Tsuji	NRIFR, Japan
Helen Wade	BirdLife International
Yu-Min Yeh	Chinese Taipei

ACAP Secretariat

Christine Bogle	Executive Secretary
Bree Forrer	Communications Advisor
Wiesława Misiak	Science Officer

Interpreters

Cecilia Alal
Sandra Hale

PaCSWG MEMBERS NOT ATTENDING PaCSWG7

Javier Arata	Chile
José (Pep) Arcos	SEO/BirdLife
Leandro Bugoni	Universidade Federal do Rio Grande (FURG), Brazil
Karine Delord	Centre national de la recherche scientifique (CNRS), France
Sebastien Descamps	Norwegian Polar Institute, Norway
Elizabeth Flint	U.S. Fish and Wildlife Service, United States of America
Rosemary Gales	Australia
Kathryn (Kate) Huyvaert	Colorado State University, USA
Gustavo Jiménez-Uzcátegui	Charles Darwin Foundation, Ecuador
Marcela Mónica Libertelli	Instituto Antártico Argentino, Argentina
Azwianewi Makhado	Department of Environmental Affairs, South Africa

Ken Morgan	Canadian Wildlife Service, Environment and Climate Change Canada
Daniel Oro	Grupo d'Ecologia de Poblacions, IMEDEA (CSIC-UIB), Spain
Flavio Quintana	National Research Council of Argentina (CONICET), Argentina
Paul Sagar	NIWA, New Zealand
Marcela Uhart	Karen C. Drayer Wildlife Health Center, School of Veterinary Medicine, University of California, Davis, USA
Barbara Wienecke	Department of Agriculture, Water and the Environment, Australian Antarctic Division, Australia
Henri Weimerskirch	Centre national de la recherche scientifique (CNRS), France
Carlos Zavalaga	University of Nagoya, Japan

ANNEX 2. ONGOING MANAGEMENT ACTIONS ASSOCIATED WITH THREATS AT BREEDING SITES OF ACAP-LISTED SPECIES

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Tasmania	Albatross Island (AU)	<i>Thalassarche cauta</i>	(Avian pox virus)	Parasite or pathogen - Pathogen	Low	DPIPWE conducting pilot investigation for management of disease and investigating methods to more robustly quantify the impact of the disease on the population.		Nature of disease that affects chicks is poorly understood. Avian pox virus has been detected - mortality of chicks is due to a combination of factors.
	Pedra Branca	<i>Thalassarche cauta</i>	<i>Morus serrator</i> (Australasian gannet)	Habitat loss or destruction - Increased competition with native species	High	None.		Level of threat to be confirmed. Gannets are increasing throughout their range, and this is evident at Pedra Branca. Number of albatross chicks produced annually has declined & inter-specific interactions observed. Cause & effect needs confirmation.
Islote Albatros	Islote Albatros	<i>Thalassarche melanophris</i>	<i>Neovison vison</i> (American mink)	Predation by alien species - Predation by alien species	Low	Traps for removing all american minks have being implemented in the islet during breeding season 2015/16.		

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Falkland Islands (Islas Malvinas) ¹	New Island	<i>Procellaria aequinoctialis</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low	Some control of cats was initiated in 2014, and a number of individuals have been shot since then. Preparatory steps are being taken for an eradication programme of the four invasive mammal species -including <i>Felis catus</i> – which threaten fauna and flora on New Island, Falkland Islands (Islas Malvinas). This feasibility study commenced in May 2022 and is due for completion by March 2024, whereby next steps will be decided.		Feral cats on New Island feed predominantly on Cottontail Rabbits, Black Rats and Thin-billed Prions (Quillfeldt et al. 2008). There is some evidence that Feral Cats prey on the chicks of White-chinned Petrels, but in spite of this, the relatively small colony of White-chinned Petrels at New Island has remained stable since 1972 (Reid et al. 2007). The current policy at New Island, as expressed in Strange (2007), is to continue to monitor the impact of all invasive mammals to understand better the interactions between the suite of alien species present on the island, and prepare and implement plans, as far as is practicable to control their populations or, where possible, to eradicate them.
Galapagos	Isla Espanola	<i>Phoebastria irrorata</i>	(Mosquito)	Parasite or pathogen - Parasite	Low	Se continua con los monitoreos de enfermedades en los cuadrantes. (Continued monitoring of vectors and affected individuals).		Mosquito biting is a known cause of egg abandonment.
Isla de La Plata	Isla de La Plata	<i>Phoebastria irrorata</i>		Human disturbance - Recreation/tourism	High	Durante la temporada de anidación se cierra el Sendero "Machete" para evitar el stress a los albatros. (During nesting, the tourist trail "Machete" is closed to tourists to avoid stressing birds).	Aumento del éxito reproductivo. (Reproductive success improved).	Visitantes en el sendero "Machete" causa stress a los padres que pueden abandonar al nido, reduciendo su éxito reproductivo.

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
	Isla de La Plata	<i>Phoebastria irrorata</i>		Stress by alien species - Nest desertion	High	Control de la población mediante veneno (anticcoagulante) en sitios sensibles	Se mantiene controlada la población lo que se manifiesta en el aumento del éxito reproductivo.	La rata produce stress a los padres que abandonan al huevo / polluelo y depreda a los huevos.
Amsterdam and St Paul	Falaise d'Entrecasteaux	<i>Procellaria cinerea</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			
	Falaise d'Entrecasteaux	<i>Procellaria cinerea</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			
	Falaise d'Entrecasteaux	<i>Thalassarche carteri</i>	<i>Pasteurella multocida</i> (Avian cholera)	Parasite or pathogen - Pathogen	High			Principally linked to chickens
	Ile Amsterdam	<i>Phoebastria fusca</i>	<i>Pasteurella multocida</i> (Avian cholera)	Parasite or pathogen - Pathogen	High			Principally linked to chickens
Crozet	Ile de la Possession	<i>Procellaria aequinoctialis</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low	rodenticide used annually on study colonies		
Kerguelen	Baie Larose	<i>Procellaria aequinoctialis</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Kerguelen	Baie Larose	<i>Procellaria aequinoctialis</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			
	Baie Larose	<i>Procellaria aequinoctialis</i>	<i>Rangifer tarandus</i> (Reindeer)	Habitat loss or destruction - Habitat destruction by alien species	Low			
	Courbet Peninsula	<i>Procellaria aequinoctialis</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low	managed locally		
	Courbet Peninsula	<i>Diomedea exulans</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low	managed locally		Research carried out at Kerguelen has shown that feral cats on Péninsule Courbet affects breeding success and rate of population growth rate of wandering albatross (Barbraud et al. 2021)
	Courbet Peninsula	<i>Procellaria aequinoctialis</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			
	Golfe du Morbihan	<i>Procellaria cinerea</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			eradicated on Chateau Island (2002) and on Australia Island (2005).
	Golfe du Morbihan	<i>Procellaria aequinoctialis</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			eradicated on Chateau Island (2002) and on Australia Island (2005).
	Golfe du Morbihan	<i>Procellaria cinerea</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Kerguelen	Golfe du Morbihan	<i>Procellaria aequinoctialis</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			
	Golfe du Morbihan	<i>Procellaria cinerea</i>	<i>Rangifer tarandus</i> (Reindeer)	Habitat loss or destruction - Habitat destruction by alien species	Low			
	Golfe du Morbihan	<i>Procellaria aequinoctialis</i>	<i>Rangifer tarandus</i> (Reindeer)	Habitat loss or destruction - Habitat destruction by alien species	Low			
	Ile Saint Lanne Gramont	<i>Procellaria aequinoctialis</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			
	Ile Saint Lanne Gramont	<i>Procellaria aequinoctialis</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			
	Joffre Peninsula	<i>Procellaria aequinoctialis</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			
	Joffre Peninsula	<i>Procellaria aequinoctialis</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			
	Joffre Peninsula	<i>Procellaria cinerea</i>	<i>Rangifer tarandus</i> (Reindeer)	Habitat loss or destruction - Habitat destruction by alien species	Low			

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Kerguelen	Joffre Peninsula	<i>Procellaria cinerea</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			
	Joffre Peninsula	<i>Procellaria cinerea</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low			
Auckland Islands	Auckland Island	<i>Diomedea epomophora</i>	<i>Sus scrofa</i> (Pig)	Predation by alien species - Predation by alien species	Low	A feasibility report for the eradication of introduced pigs, mice and cats was published in 2021, which summarised 3 years of research and field trials to understand if an eradication is practicable. The Maukahuka Pest Free Auckland Island Technical feasibility study report concludes that eradication of Auckland Island is feasible		
	Auckland Island	<i>Thalassarche steadi</i>	<i>Sus scrofa</i> (Pig)	Predation by alien species - Predation by alien species	Low			
	Auckland Island	<i>Thalassarche steadi</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low			

Auckland Island	<i>Diomedea antipodensis</i>	<i>Sus scrofa</i> (Pig)	Predation by alien species - Predation by alien species	Low	<p>(achievable, sustainable and acceptable) dependent on some improvements to available tools for each pest species. In 2020, Covid-19 halted progress towards initiating the project. However, in recent months this work has been picked up again by the Department of Conservation as a high priority, and investigations continue into opportunities for funding, including discussions with philanthropic investors. Research into novel tools and technology which have been identified as necessary to achieve a pest free Auckland Island have also continued. In 2022, a field trial on Auckland Island tested the efficacy of a novel toxic bait targeting feral cats. Results of this trial were promising, and a follow up trial is being planned for mid-2023. A trial of a toxic bait for feral pigs was also conducted in 2022 and found to be highly effective. Both of these tool will be critical in delivery of a pest free Auckland Island. A summary of this research (and other research conducted in the subantarctic for the restoration of New Zealand's subantarctic islands) has recently been published in a special issue of the New Zealand Journal of Ecology.</p>		
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Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Marion Island	Prince Edward Islands	<i>Phoebastria palpebrata</i>	<i>Mus musculus</i> (House mouse)	Predation by alien species - Predation by alien species	Low	Mouse eradication planned for winter 2024		Mice have been recorded preying on on all surface nesting albatrosses at Marion. Although the records/observations were initially (in the early 2000s) localised and infrequent, there is mounting evidence that the scale and extent of attacks is increasing, and is likely to continue doing so with ongoing and predicted changes in climatic conditions – warmer and drier conditions facilitating more favourable breeding for mice.
Marion Island	Prince Edward Islands	<i>Procellaria cinerea</i>	<i>Mus musculus</i> (House mouse)	Predation by alien species - Predation by alien species	Low	Eradication planned for winter 2024.		Dilley B, Schoombie S, Stevens K, Davies D, Perold V, Osborne A, Schoombie J, Brink C, Carpenter-Kling T, Ryan P (2017) Mouse predation affects breeding success of burrow-nesting petrels at sub-Antarctic Marion Island. Antarctic Science 30: 1-12 doi 10.1017/S0954102017000487
Balearic Archipelago	Cabrera	<i>Puffinus mauretanicus</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	Low	No measures taken. Local government not prone to address actions to control cats, fear of social opposition.		Detected in Picamosques islet, along with Genet. Cat reported in one out of 6 breeding islets in Cabrera, affecting about 10% of the local population. No detailed information.
Balearic Archipelago	Formentera	<i>Puffinus mauretanicus</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	High	No detailed information, nor measures taken (except old eradication in a small islet, Espalmador). Local government not prone to address actions to control cats, fear of social opposition.		Present in 3 out of 5 colonies (plus eradicated in another) including the historically largest one of the species, which has apparently declined severely in recent years, affecting 89.5% of the current population in Formentera. Predation known, not quantified.

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
	Formentera	<i>Puffinus mauretanicus</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low	No measures taken (old eradication, incomplete, in Espalmador)		Present in 4 out of 5 sites, which hold about 94% of the Formentera population. No effect quantified, apparently far less impacting than cats.
	Ibiza	<i>Puffinus mauretanicus</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low	Attempts of eradication, but not systematic (dependent on low budget, no specific project)		Most islets have rat presence in varying densities, affecting 93% of the estimated population. There have been trials of eradication, apparently not completed - and/or no monitoring programme afterwards. Impact on breeding success, apparently not severe, at least for some islets (e.g. Conillera; higher impact in Bosc). Biosecurity guidelines being prepared for the W Ibiza islets (ongoing work under LIFE project PanPuffinus)
	Mallorca	<i>Puffinus mauretanicus</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low	Action recently taken in Dragonera by local administration. Eradication in 2011, and follow-up work ongoing.		Formerly present in 3 out of 4 colonies, recently eradicated in Dragonera (2012), with current monitoring. Also eradication projects in Conills and Malgrat, but not post-monitoring, probably present (?). Apparently low impact, no severe effects on breeding success.
Balearic Archipelago	Menorca	<i>Puffinus mauretanicus</i>	<i>Felis catus</i> (Cat)	Predation by alien species - Predation by alien species	High	Local government not prone to address actions to control cats, fear of social opposition.		Present in Mola de MaÃ³, where the major colony of Menorca is located (>75% of the local population). Predation is severe, on chicks and adults in the past (up to >20 adult corpses found in a single visit), but currently there does not seem to be predation (cats confirmed in the neighbourhood with camera traps, but none in the colony since installation of cameras in 2018). Also presence of marten (<i>Martes martes</i>), weasel (<i>Mustela nivalis</i>), with no evidence of predation.

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
	Menorca	<i>Puffinus mauretanicus</i>	<i>Rattus rattus</i> (Black (ship) rat)	Predation by alien species - Predation by alien species	Low	Some eradication trials in Mola de Mao (no success).		Present in almost all colonies (except Illa de l'Aire). Events of predation on eggs, but no apparent severe impact on breeding performance. Current work of monitoring with cameras.

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Gough	Gough Island	<i>Diomedea dabbenena</i>	<i>Mus musculus</i> (House mouse)	Predation by alien species - Predation by alien species	High	The Gough Island Restoration Programme led by RSPB and Tristan da Cunha Island Council has now completed two all island bait drops to eradicate the mice.		
	Gough Island	<i>Procellaria cinerea</i>	<i>Mus musculus</i> (House mouse)	Predation by alien species - Predation by alien species	Low	The UK Government, charitable foundations and private individuals have supported this £10.5 million. The mice eradication operation, originally planned for 2020, was delayed until June-August 2021 due to implications caused by the global Covid-19 pandemic. While the programme was executed successfully, unfortunately mice were detected in December 2021. RSPB have initiated an investigation into why the eradication was unsuccessful. This investigation will be undertaken by an independent panel of eradication, toxicology and mouse ecology experts to review all aspects of the Gough Island eradication attempt. Findings of the review are expected in mid-late 2023, after which decisions will be made about a future eradication attempt (PaCSWG7 Inf 06).		An impact on this species has been assumed because House Mice are affecting Tristan Albatross and burrow-nesting, summer-breeding petrels. 60% of chicks failed (n=35 hatchlings) reported by Dilley et al 2015. Oppel et al (2021; PaCSWG7 Inf 07) used population monitoring and mark-recapture data to estimate the past population trajectory of the critically endangered Tristan albatross <i>Diomedea dabbenena</i> by accounting for unobservable birds at sea in an integrated population model. They then projected the future population trajectory of Tristan albatrosses for scenarios with or without predation by invasive house mice <i>Mus musculus</i> on Gough Island. Models indicated that eradicating invasive mice would lead to a two-fold increase in breeding success and a 1.8–7.6 times higher albatross population by 2050 than without this intervention – i.e. mouse eradication is necessary to halt the ongoing population decrease of the Tristan albatross.

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
Hawaii	Kaula	<i>Phoebastria nigripes</i>		Human disturbance - Military action	High	The island is managed by the U.S. military and is used as a bombing target during military training.		The island is used as a bombing range for non-exploding ordnance.
	Kaula	<i>Phoebastria immutabilis</i>		Human disturbance - Military action	High	The island is still used as a bombing range for military training.		The island is used by the U.S. Navy as a bombing range for non-exploding ordnance.
	Kure Atoll	<i>Phoebastria nigripes</i>		Habitat loss or destruction - Vegetation encroachment	Low	Ongoing eradication program using herbicide and manual control		
Hawaii	Kure Atoll	<i>Phoebastria immutabilis</i>		Natural disaster - Sea-level rise	High	Propagation and planting of <i>Scaevola sericea</i> that encourages dune growth and stabilization		Loss of nests by periodic inundation due to tidal surges, storms and tsunamis.
	Kure Atoll	<i>Phoebastria nigripes</i>		Natural disaster - Sea-level rise	High			
	Laysan Island	<i>Phoebastria nigripes</i>		Natural disaster - Sea-level rise	High	Continue protection of the low Northwestern Hawaiian Islands to maintain healthy populations while initiating new colonies in the main Hawaiian islands.		Loss of nests by periodic inundation due to tidal surges, storms and tsunamis, especially in low-lying areas.
	Laysan Island	<i>Phoebastria immutabilis</i>		Natural disaster - Sea-level rise	High			
	Lisianski Island	<i>Phoebastria immutabilis</i>		Natural disaster - Sea-level rise	High			Loss of nests by periodic inundation due to tidal surges, storms and tsunamis.
	Lisianski Island	<i>Phoebastria nigripes</i>		Natural disaster - Sea-level rise	High			

Island Group	Breeding site	Species	Threat species	Nature of threat	Current Threat Magnitude	ongoing management actions or why no management response in place	why management response was or was not effective	Additional comments
	Midway Atoll	<i>Phoebastria immutabilis</i>	<i>Mus musculus</i> (House mouse)	Predation by alien species - Predation by alien species	Low	Mouse population suppression in the affected areas using trapping and rodenticide. Eradication feasibility study completed in summer 2017. Bait uptake trials completed and implementation planning underway.		However, population increasing, so flagged as "not a real threat". but recent increases in mouse predation rates and potential exposure of ~ 50% of world breeding population warrants revisiting threat status.
Hawaii	Pearl and Hermes Reef	<i>Phoebastria nigripes</i>		Natural disaster - Sea-level rise	High			Loss of nests, especially those in low-lying areas, by periodic inundation due to tidal surges, storms and tsunamis.
	Pearl and Hermes Reef	<i>Phoebastria immutabilis</i>		Natural disaster - Sea-level rise	High			Loss of nests by periodic inundation due to tidal surges, storms and tsunamis, especially in low lying areas.

¹A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty of the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

ANNEX 3. POPULATION AND CONSERVATION STATUS WORKING GROUP TERMS OF REFERENCE

The Terms of Reference for the Population and Conservation Status Working Group (PaCSWG), were updated at the Thirteenth Meeting of the Advisory Committee, Edinburgh, United Kingdom, 22 – 26 May 2023.

The PaCSWG should provide advice and recommendations to the Advisory Committee. It should also:

- oversee the contribution, collation and maintenance of the most up-to-date information on population size, trends and status, demography, at-sea distribution, management of, and land-based and other emerging threats to, albatrosses and petrels listed on Annex 1 of ACAP;
- oversee reviews and analyses of information, and produce assessments and indicators of the population and conservation status of listed and candidate ACAP species;
- identify key gaps in knowledge of the population size and conservation status, demography, at-sea distribution, land-based and other emerging threats and their management for each ACAP species;
- identify populations of ACAP species that are priorities for monitoring, research or conservation actions;
- assess land-based and other emerging threats to ACAP species, determine which are priorities for management actions and review the effectiveness of those actions;
- identify internationally important breeding sites for ACAP species; and
- develop, review and maintain best-practice guidelines for population monitoring and management of land-based and other emerging threats.