Agreement on the Conservation of Albatrosses and Petrels

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Prioritisation framework for terrestrial threats to ACAP-listed species

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Background

The development of a process to assist with the identification of conservation priorities for ACAP was initiated at AC3, and led by Spencer Clubb (New Zealand) with input from members of the ACAP working groups, Secretariat and others. Progress up to and including AC5 is described in AC5, Doc 15 "Framework for Identification of ACAP Conservation Priorities" by New Zealand. An overview of subsequent progress is provided in AC6, Doc 15 "Progress with the Development of a Priority Setting Framework for the Identification of ACAP Conservation Priorities" by the ACAP Secretariat and WG officials.

The purpose of this paper is to describe in more detail the terrestrial threats component of the prioritisation framework for ACAP-listed species, list the data that were incorporated into this work, present the results based on a suitable algorithm, report the management measures that have been put in place or are proposed by Parties to address the threats, and make recommendations for further action.

Objectives of the prioritisation process

The key objectives of the prioritisation process with respect to breeding sites are to identify actions that are considered the most likely to reduce or eliminate the worst threats to the most vulnerable ACAP-listed species, and also to identify threats that are in particular need of further research.

Methodology

The framework uses the list of threats in the ACAP database. Threat assessment is an ongoing process, and discussion has taken place during the inter-sessional period among the BSWG convenor, ACAP Science Officer and experts to update and verify those listed against the selection criteria. These criteria were adapted from generic guidance produce by the International Union for the Conservation of Nature (IUCN) for terrestrial species. The ACAP criteria stipulate that threats should only be listed if they are documented in a report or paper, or vouched for by an expert. The threat must also be known or highly likely to cause an impact that would lead to a population decline, or be severely limiting expansion in numbers or distribution in a stable or slightly increasing population on an already occupied island. This excludes natural predation, and threats that cause the loss of a few eggs, chicks or adults but have minimal impact at the population level, or have been eliminated because of past or current management.

The vast majority of the threats to ACAP-listed species that meet these criteria relate to introduced mammals or disease. The remainder are natural disasters (volcanic activity), which have been excluded from the prioritisation exercise. However, if other natural disasters (e.g. tsunamis, extreme weather) are considered in the future to have sufficient impact that

they meet the threat criteria, and there are management actions that could mitigate their effects, then these would obviously merit inclusion in the prioritisation process.

The 47 threats from introduced mammals or disease to ACAP breeding sites are listed in Table 1. This table includes the species affected, island group, island, breeding site (in some cases part-island), *size of the global population of that species*, breeding population at the site, *proportion of the global population at the site*, *population trend*, threat species, nature of threat, *current threat magnitude* (based on the Scope and Severity of the threat using standard ACAP criteria), *likelihood of success* (based on technical feasibility and not cost) of the management intervention that would be necessary to eliminate the threat, and an overall score based on the threat ranking algorithm (nb. variables in italics are used in the prioritisation scoring; see below). The data on population size and trend are taken from the ACAP database. Where the number of pairs at the site is unknown, the category value for *proportion of global population* (0-10%, 11-50% and 51-100%) was based on the size of the site. The *population trend* for the site is based on that reported for the island group, and if unavailable, for the nearest island group or for the global population. The *likelihood of success* of a particular management intervention is categorised as High (has worked in similar circumstances, i.e., island of comparable size and remoteness etc.), Medium (good evidence that it is feasible, but has not been achieved in similar circumstances), or Low or Unknown (never been attempted in similar circumstances or success doubtful).

The overall prioritisation score is based on three attributes (Vulnerability, Threat and Likelihood of success). The Vulnerability attribute is the product of the weighting given to this attribute/number of variables used, and the sum of the scores for the assigned categories of *global population size*, *proportion of global population at site* and *population trend*. The Threat attribute is the product of the weighting given to this attribute/number of variables used, and the assigned category of *current threat magnitude*. The Likelihood of success attribute is the weighting given to this attribute/number of variables used, and the assigned category of *likelihood of success*. The weightings for the three attributes, and for the scores for different categories, can be changed, the overall prioritisation score recalculated, and the results sorted by species or island. Mike Double has created a macro-enabled Excel workbook to do this, which is available on request from the Secretariat or WG convenors. Results shown here reflect the use of the following algorithm, which was agreed by the small ad hoc working group at AC5.

<u>Scores</u>

Global population size (0-99=5, 100-999=4, 1,000-9,999=3, 10,000-99,999=2, 100,000+=1)

Proportion of global population at site (0-10%=2, 11-50%=3, 51-100%=4)

Population trend (Steep decline=5, Decline=4, Stable=2, Increase=1, Steep increase=1)

Current threat magnitude (High=5, Medium=3, Low=1)

Likelihood of success (High=5, Medium=3, Low or unknown=1)

<u>Attribute weightings</u>

Vulnerability=4, Threat=4, Likelihood of success=2.

Various sensitivity tests were also carried out.

Table 1. Summary of population data, terrestrial threats and likelihood of success of management intervention at breeding sites of ACAP-listed species (see text for details).

Species	Island group	Island	Breeding site	Size of global pop. (pairs)	No. Pairs at site	Prop. global pop. at site	Trend at site	*Threat species*	Nature of threat	Threat magnitude	Likelihood of success (technical Feasibility)	Score
Diomedea dabbenena	Gough	Gough Island	Gough Island	1,000-9,999	1698	51-100%	Decline	*Mus musculus (House mouse)*	Predation by alien species - Predation by alien species	Medium	Medium	32.7
Procellaria cinerea	Macquarie Island	Macquarie Island	Macquarie Island	10,000-99,999	32	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Medium	High	32.7
Thalassarche cauta	Tasmania	Pedra Branca	Pedra Branca	10,000-99,999	35	0-10%	Decline	*Morus serrator (Australasian gannet)*	Habitat loss or destruction - Increased competition with native species	High	Low or unknown	32.7
Procellaria cinerea	Macquarie Island	Macquarie Island	Macquarie Island	10,000-99,999	32	0-10%	Decline	*Oryctolagus cuniculus (Rabbit)*	Habitat loss or destruction - Habitat destruction by alien species	Medium	Medium	28.7
Thalassarche carteri	Amsterdam and St Paul	Ile Amsterdam	Falaise d'Entrecasteaux	10,000-99,999	27000	51-100%	Decline	*Pasteurella multocida (Avian cholera)*	Parasite or pathogen - Pathogen	Medium	Low or unknown	27.3
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur) [1]	South Georgia (Islas Georgias del Sur)[1]	Barff	100,000+	119594	11-50%	Decline	*Rangifer tarandus (Reindeer)*	Habitat loss or destruction - Habitat destruction by alien species	Low	High	24.7
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur)[1]	South Georgia (Islas Georgias del Sur)[1]	Barff	100,000+	119594	11-50%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	Medium	24.7
Procellaria cinerea	Amsterdam and St Paul	Ile Amsterdam	Falaise d'Entrecasteaux	10,000-99,999	5-10	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	High	24.7
Procellaria cinerea	Amsterdam and St Paul	Ile Amsterdam	Falaise d'Entrecasteaux	10,000-99,999	5-10	0-10%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	High	24.7
Procellaria cinerea	Kerguelen	Kerguelen (Grande Terre)	Golfe du Morbihan	10,000-99,999	3400	0-10%	Decline	*Rangifer tarandus (Reindeer)*	Habitat loss or destruction - Habitat destruction by alien species	Low	High	24.7
Procellaria cinerea	Kerguelen	Kerguelen (Grande Terre)	Joffre Peninsula	10,000-99,999	no data	0-10%	Decline	*Rangifer tarandus (Reindeer)*	Habitat loss or destruction - Habitat destruction by alien species	Low	High	24.7
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur)[1]	Harcourt Island	Harcourt Island	100,000+	no data	0-10%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	High	23.3
Procellaria aequinoctialis	Crozet	Ile de la Possession	Ile de la Possession	100,000+	5783	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	High	23.3
Procellaria aequinoctialis	Kerguelen	Ile Saint Lanne Gramont	Ile Saint Lanne Gramont	100,000+	no data	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	High	23.3
Procellaria aequinoctialis	Kerguelen	Ile Saint Lanne Gramont	Ile Saint Lanne Gramont	100,000+	no data	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	High	23.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Golfe du Morbihan	100,000+	3654-4132	0-10%	Decline	*Rangifer tarandus (Reindeer)*	Habitat loss or destruction - Habitat destruction by alien species	Low	High	23.3

[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 Sandwich del Sur) and the surrounding maritime areas".

Species	Island group	Island	Breeding site	Size of global pop. (pairs)	No. Pairs at site	Prop. global pop. at site	Trend at site	*Threat species*	Nature of threat	Threat magnitude	Likelihood of success (technical Feasibility)	Score
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Baie Larose	100,000+	no data	0-10%	Decline	*Rangifer tarandus (Reindeer)*	Habitat loss or destruction - Habitat destruction by alien species	Low	High	23.3
Procellaria aequinoctialis	Falkland Islands (Islas Malvinas)[1]	New Island	New Island	100,000+	26	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	High	23.3
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur) [1]	Saddle Island	Saddle Island	100,000+	no data	0-10%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	High	23.3
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur) [1]	South Georgia (Islas Georgias del Sur)[1]	Stromness and Cumberland	100,000+	64361	0-10%	Decline	*Rangifer tarandus (Reindeer)*	Habitat loss or destruction - Habitat destruction by alien species	Low	High	23.3
Diomedea antipodensis	Auckland Islands	Auckland Island	Auckland Island	1,000-9,999	72	0-10%	Decline	*Sus scrofa (Pig)*	Predation by alien species - Predation by alien species	Low	Medium	22.0
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur)[1]	South Georgia (Islas Georgias del Sur)[1]	Northwest	100,000+	146545	11-50%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Procellaria cinerea	Kerguelen	Kerguelen (Grande Terre)	Golfe du Morbihan	10,000-99,999	3400	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Procellaria cinerea	Kerguelen	Kerguelen (Grande Terre)	Joffre Peninsula	10,000-99,999	no data	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Procellaria cinerea	Kerguelen	Kerguelen (Grande Terre)	Golfe du Morbihan	10,000-99,999	3400	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Procellaria cinerea	Kerguelen	Kerguelen (Grande Terre)	Joffre Peninsula	10,000-99,999	no data	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Thalassarche steadi	Auckland Islands	Auckland Island	South West Cape	10,000-99,999	5264	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Thalassarche steadi	Auckland Islands	Auckland Island	South West Cape	10,000-99,999	5264	0-10%	Decline	*Sus scrofa (Pig)*	Predation by alien species - Predation by alien species	Low	Medium	20.7
Diomedea epomophora	Auckland Islands	Auckland Island	Auckland Island	1,000-9,999	2	0-10%	Stable	*Sus scrofa (Pig)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Diomedea exulans	Kerguelen	Kerguelen (Grande Terre)	Courbet Peninsula	1,000-9,999	354	0-10%	Stable	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Golfe du Morbihan	100,000+	3654-4132	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Baie Larose	100,000+	no data	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Courbet Peninsula	100,000+	no data	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Joffre Peninsula	100,000+	no data	0-10%	Decline	*Felis catus (Cat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3

Species	Island group	Island	Breeding site	Size of global pop. (pairs)	No. Pairs at site	Prop. global pop. at site	Trend at site	*Threat species*	Nature of threat	Threat magnitude	Likelihood of success (technical Feasibility)	Score
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Golfe du Morbihan	100,000+	3654-4132	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Baie Larose	100,000+	no data	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Courbet Peninsula	100,000+	no data	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	Kerguelen	Kerguelen (Grande Terre)	Joffre Peninsula	100,000+	no data	0-10%	Decline	*Rattus rattus (Black rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur)[1]	South Georgia (Islas Georgias del Sur)[1]	Salisbury	100,000+	16365	0-10%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur)[1]	South Georgia (Islas Georgias del Sur)[1]	Southeast	100,000+	43355	0-10%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Procellaria aequinoctialis	South Georgia (Islas Georgias del Sur)[1]	South Georgia (Islas Georgias del Sur)[1]	Stromness and Cumberland	100,000+	64361	0-10%	Decline	*Rattus norvegicus (Brown rat)*	Predation by alien species - Predation by alien species	Low	Medium	19.3
Thalassarche chrysostoma	Macquarie Island	Macquarie Island	Macquarie Island	10,000-99,999	97	0-10%	Stable	*Oryctolagus cuniculus (Rabbit)*	Habitat loss or destruction - Habitat destruction by alien species	Low	Medium	18.0
Phoebetria fusca	Amsterdam and St Paul	Ile Amsterdam	Ile Amsterdam	10,000-99,999	474	0-10%	Decline	*Pasteurella multocida (Avian cholera)*	Parasite or pathogen - Pathogen	Low	Low or unknown	16.7
Phoebetria palpebrata	Macquarie Island	Macquarie Island	Macquarie Island	10,000-99,999	367	0-10%	Increase	*Oryctolagus cuniculus (Rabbit)*	Habitat loss or destruction - Habitat destruction by alien species	Low	Medium	16.7
Thalassarche melanophris	Macquarie Island	Macquarie Island	Macquarie Island	100,000+	46	0-10%	Stable	*Oryctolagus cuniculus (Rabbit)*	Habitat loss or destruction - Habitat destruction by alien species	Low	Medium	16.7
Diomedea exulans	Prince Edward Islands	Marion Island	Marion Island	1,000-9,999	434	0-10%	Increase	*Mus musculus (House mouse)*	Predation by alien species - Predation by alien species	Low	Low or unknown	14.0
Thalassarche cauta	Tasmania	Albatross Island (AU)	Albatross Island (AU)	10,000-99,999	5233	11-50%	Increase	*Unknown pathogen*	Parasite or pathogen - Pathogen	Low	Low or unknown	14.0

Results

The score for each threat to an ACAP-listed species at the relevant breeding site, taking account of the species' Vulnerability (based on *global population size*, *proportion of global population at site* and *population trend at site*), the level of the Threat and the Likelihood of success of management intervention, is indicated in the last column of Table 1. Values for these prioritisation scores range from 14.0 to 32.7. The threats at the five sites with the highest scores are considered to be of Medium or High magnitude in the ACAP database; the remaining threats are all listed as Low. At three breeding sites, the population trend is listed as increasing, and the threats will be re-assessed against the ACAP criteria.

A single score for each threat on each island was calculated as the sum of the prioritisation scores for all species present, and the mean of the prioritisation scores if there are multiple breeding sites on the same island. A summary of these threats is provided in Table 2. The priority level (High, Medium or Low) reflects natural breaks in the distribution of scores for each type of threat. For "Habitat loss or destruction/predation by alien species", this includes a small outlying group (High priority), a large middle group with scores that all differ from each other by ≤2 and which would not be appropriate to further sub-divide (Medium priority), and one outlier with a low score (Low priority).

On this basis, the highest priority action with regard to a Parasite or Pathogen would be to address the problem of Avian cholera at Ile Amsterdam; with regard to "Increased competition with native species", to exclude Australasian gannet *Morus serrator* from Pedra Branca, and; with regard to "Habitat loss or destruction/predation by alien species" would be to remove pigs *Sus scrofa* from Auckland Island, rabbits *Oryctolagus cuniculus* and rats *Rattus rattus* from Macquarie Island and house mouse *Mus musculus* from Gough Island The lowest priorities would be to remove house mouse *Mus musculus* from Marion Island and the unknown pathogen from Albatross Island.

Sensitivity tests

Retaining the same attribute weightings, but increasing the score for islands holding 51-100% of the global population (i.e. reflecting ever greater concern for populations threatened at their majority or only breeding site) influenced the rank order, but always resulted in the same three or four threats in the outlying group, hence considered to be High priority (Table 2). If populations with ≤10 individuals (grey petrel at Ile Amsterdam, and southern royal albatross at Auckland Island) were excluded from the framework, eliminating cats *Felis catus* and brown rats *Rattus norvegicus* from Ile Amsterdam were no longer priorities. If further populations, with ≤50 individuals (grey petrel and black-browed albatross *Thalassarche melanophris* at Macquarie Island, white-chinned petrel *Procellaria aequinoctialis* at New Island, and shy albatross *Thalassarche cauta* at Pedra Branca) were excluded from the framework, eradicating black rats *Rattus rattus* from Macquarie and cats from New Island are no longer priorities.

Indicative costs based on consultation with eradication experts are also provided in Table 2. However, it is important to note that the bulk of these costs are associated with planning and mobilisation, and hence economies of scale are substantial if an eradication campaign targets more than one species on the same island(s), or more than one island in the same group.

Table 2. Summary of prioritisation process by island and threat species, with indicative costs. Economy of effort would greatly reduce total cost for eradication campaigns for multiple threat species in the same island group (cells highlighted using the same colour). Priority based on natural breaks in ranking of prioritisation framework score (see text). [2]All populations. [3]Excludes populations with ≤10 individuals, [4]Excludes populations with ≤50 individuals. n/a = not a priority.

Island	Threat	Priority[2]	Priority[3]	Priority[4]	Indicative cost (AUS$)	Explanation
Parasite or Pathogen						
Ile Amsterdam	Pasteurella multocida (Avian cholera)	High	High	High	Unknown	Major threat to several ACAP species
Albatross Island (AU)	Unknown pathogen	Low	Low	Low	Unknown	Low threat. Low feasibility of action.
Increased competition with native species						
Pedra Branca	Morus serrator (Australasian gannet)	High	High	n/a	100 thousand	Major threat to small population
Habitat loss or destruction/predation by alien species						
Macquarie Island	Oryctolagus cuniculus (Rabbit)	High	High	High	33 million	Major threat to several ACAP species
Auckland Island	Sus scrofa (Pig)	High	High	High	25 million	Threat to several ACAP species
Gough Island	Mus musculus (House mouse)	High	High	High	5.5 million	Major threat to endemic species
Macquarie Island	Rattus rattus (Black rat)	High	High	n/a	33 million	Threat to several ACAP species
Ile Amsterdam	Felis catus (Cat)	Medium	n/a	n/a	1-2 million	High feasibility of eradication
Ile Amsterdam	Rattus norvegicus (Brown rat)	Medium	n/a	n/a	1-2 million	High feasibility of eradication
Kerguelen (Grande Terre)	Rangifer tarandus (Reindeer)	Medium	Medium	Medium	1-2 million	High feasibility of eradication
Harcourt Island	Rattus norvegicus (Brown rat)	Medium	Medium	Medium	1.6 million	High feasibility of eradication
Ile de la Possession	Rattus rattus (Black rat)	Medium	Medium	Medium	10 million	High feasibility of eradication
Ile Saint Lanne Gramont	Felis catus (Cat)	Medium	Medium	Medium	420 thousand	High feasibility of eradication
Ile Saint Lanne Gramont	Rattus rattus (Black rat)	Medium	Medium	Medium	140 thousand	High feasibility of eradication
New Island	Felis catus (Cat)	Medium	Medium	n/a	1-2 million	High feasibility of eradication
Saddle Island	Rattus norvegicus (Brown rat)	Medium	Medium	Medium	1.6 million	High feasibility of eradication
South Georgia (Islas Georgias del Sur)[1]	Rangifer tarandus (Reindeer)	Medium	Medium	Medium	650-800,000	High feasibility of eradication
Auckland Island	Felis catus (Cat)	Medium	Medium	Medium	25 million	Medium feasibility of eradication
Kerguelen (Grande Terre)	Felis catus (Cat)	Medium	Medium	Medium	>10 million	Medium feasibility of eradication
Kerguelen (Grande Terre)	Rattus rattus (Black rat)	Medium	Medium	Medium	>25 million	Medium feasibility of eradication
South Georgia (Islas Georgias del Sur)[1]	Rattus norvegicus (Brown rat)	Medium	Medium	Medium	13 million	Medium feasibility of eradication
Marion Island	Mus musculus (House mouse)	Low	Low	Low	30 million	Low threat. Low feasibility of action.

Current threat management

Information that has been made available to ACAP through the database web portal on any ongoing or planned management actions associated with threats to ACAP-listed species at breeding sites, or reasons why no management response is in place, are listed in Table 3. Parties are requested to check this information and provide updates, including on the existence of feasibility plans for eradications or other management interventions. Possible sources of information include Annex 6 and 7 of AC6 Doc 17 – ACAP Implementation report - which list the management plans applicable to ACAP breeding sites, and the islands where introduced vertebrates are currently present, have been eradicated since 2000, or an eradication is planned.

Table 3. Information reported by Parties and held in the ACAP database on ongoing management actions associated with threats at breeding sites of ACAP-listed species.

Species	Breeding site name	Threat species	Nature of threat	Threat Magnitude	Ongoing management actions associated with this threat or why no management response in place
Diomedea antipodensis	Auckland Island	Sus scrofa (Pig)	Predation by alien species	Low	
Diomedea dabbenena	Gough Island	Mus musculus (House mouse)	Predation by alien species	Medium	Eradication under consideration
Diomedea epomophora	Auckland Island	Sus scrofa (Pig)	Predation by alien species	Low	
Diomedea exulans	Marion Island	Mus musculus (House mouse)	Predation by alien species	Low	Ad hoc culling
Diomedea exulans	Courbet Peninsula	Felis catus (Cat)	Predation by alien species	Low	managed locally
Procellaria cinerea	Golfe du Morbihan	Rangifer tarandus (Reindeer)	Habitat destruction by alien species	Low	
Procellaria cinerea	Joffre Peninsula	Rangifer tarandus (Reindeer)	Habitat destruction by alien species	Low	
Procellaria cinerea	Joffre Peninsula	Felis catus (Cat)	Predation by alien species	Low	
Procellaria cinerea	Joffre Peninsula	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria cinerea	Golfe du Morbihan	Felis catus (Cat)	Predation by alien species	Low	
Procellaria cinerea	Macquarie Island	Rattus rattus (Black (ship) rat)	Predation by alien species	Medium	Eradication program has been developed for rabbits, rats and mice and funding has been secured. Currently finalising logistics with implementation planned for 2010.
Procellaria cinerea	Falaise d'Entrecasteaux	Felis catus (Cat)	Predation by alien species	Low	
Procellaria cinerea	Falaise d'Entrecasteaux	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria cinerea	Golfe du Morbihan	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria cinerea	Macquarie Island	Oryctolagus cuniculus (Rabbit)	Habitat destruction by alien species	Medium	Eradication program has been developed for rabbits, rats and mice and funding has been secured. Currently finalising logistics with implementation planned for 2010.
Phoebetria palpebrata	Macquarie Island	Oryctolagus cuniculus (Rabbit)	Habitat destruction by alien species	Low	
Phoebetria fusca	Ile Amsterdam	Pasteurella multocida (Avian cholera)	Pathogen	Low	
Procellaria aequinoctialis	Barff	Rangifer tarandus (Reindeer)	Habitat destruction by alien species	Low	Eradication under consideration
Procellaria aequinoctialis	Baie Larose	Rangifer tarandus (Reindeer)	Habitat destruction by alien species	Low	
Procellaria aequinoctialis	Golfe du Morbihan	Rangifer tarandus (Reindeer)	Habitat destruction by alien species	Low	

Species	Breeding site name	Threat species	Nature of threat	Threat Magnitude	Ongoing management actions associated with this threat or why no management response in place
Procellaria aequinoctialis	Courbet Peninsula	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Joffre Peninsula	Felis catus (Cat)	Predation by alien species	Low	
Procellaria aequinoctialis	Joffre Peninsula	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Ile Saint Lanne Gramont	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Ile Saint Lanne Gramont	Felis catus (Cat)	Predation by alien species	Low	
Procellaria aequinoctialis	Golfe du Morbihan	Felis catus (Cat)	Predation by alien species	Low	
Procellaria aequinoctialis	Stromness and Cumberland	Rangifer tarandus (Reindeer)	Habitat destruction by alien species	Low	Eradication under consideration
Procellaria aequinoctialis	Ile de la Possession	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	rodenticide used annually on study colonies
Procellaria aequinoctialis	Golfe du Morbihan	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Harcourt Island	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	Eradication under consideration
Procellaria aequinoctialis	New Island	Felis catus (Cat)	Predation by alien species	Low	
Procellaria aequinoctialis	Courbet Peninsula	Felis catus (Cat)	Predation by alien species	Low	mananged locally
Procellaria aequinoctialis	Saddle Island	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	The first phase of a rodent eradication programme was initiated in February 2011. The first phase (February - April 2011) will include the baiting of Saddle Island to eradicate Norway Rats present on the island. The eradication programme is being implemented by South Georgia Heritage Trust.
Procellaria aequinoctialis	Southeast	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	The first phase of a rodent eradication programme was initiated in February 2011. The aim of the first phase is to bait three areas in the Cumberland breeding site (Greene and Thatcher Peninsulas, and a headland west of Mercer Bay) to eradicate rats from these areas, and to serve as a trial to inform plans to eradicate of rodents from the remainder of South Georgia (Islas Georgias del Sur)[1]. The eradication programme is being implemented by the South Georgia Heritage Trust.
Procellaria aequinoctialis	Stromness and Cumberland	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Barff	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Northwest	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Salisbury	Rattus norvegicus (Brown (Norwegian) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Baie Larose	Felis catus (Cat)	Predation by alien species	Low	
Procellaria aequinoctialis	Baie Larose	Rattus rattus (Black (ship) rat)	Predation by alien species	Low	
Procellaria aequinoctialis	Auckland Island	Sus scrofa (Pig)	Predation by alien species	Low	

Species	Breeding site name	Threat species	Nature of threat	Threat Magnitude	Ongoing management actions associated with this threat or why no management response in place
Thalassarche cauta	Pedra Branca	Morus serrator (Australasian gannet)	Habitat loss or destruction - Increased competition with native species	High	None
Thalassarche cauta	Albatross Island (AU)	Unknown pathogen	Pathogen	Low	None
Thalassarche carteri	Falaise d'Entrecasteaux	Pasteurella multocida (Avian cholera)	Pathogen	Medium	
Thalassarche melanophris	Macquarie Island	Oryctolagus cuniculus (Rabbit)	Habitat destruction by alien species	Low	Eradication program has been developed for rabbits, rats and mice and funding has been secured. Currently finalising logistics with implementation planned for 2010.
Thalassarche chrysostoma	Macquarie Island	Oryctolagus cuniculus (Rabbit)	Habitat destruction by alien species	Low	
Thalassarche steadi	South West Cape	Sus scrofa (Pig)	Predation by alien species	Low	
Thalassarche steadi	South West Cape	Felis catus (Cat)	Predation by alien species	Low	

Conclusions

WG members are requested to:

1) Check for errors in entries for population size, trend, threats etc. in Table 1.
2) Consider whether the weightings used in the current algorithm produce results consistent with expert opinion.
3) Recommend to the Advisory Committee that Parties provide updates on actions currently being taken to address the threats to ACAP-listed species at their breeding sites, or reasons why no management response is in place.
4) Advise the Advisory Committee on the key actions to reduce or eliminate the most important threats to ACAP-listed species at their breeding sites, and on those threats that are in particular need of further research.
5) Make other recommendations as appropriate.

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