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WP 1

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Presented by: SCAR
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Proposal to List Southern Giant Petrel as a Specially Protected Species under Annex II

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Introduction

1. The origins of the designation of Specially Protected Species go back to III ATCM in 1964 at which the Agreed Measures for the Conservation of the Antarctic Flora and Fauna were adopted. Article VI paras 5–7 and Annex A indicate that any native mammals or birds listed in Annex A are considered "Specially Protected Species" and "shall be accorded special protection by Participating Governments". The paragraphs also indicate that permits are required for killing, wounding, capturing or molesting any of these species and such permits can only be issued for "compelling scientific reasons".
2. Neither in the drafting of the Agreed Measures, in the period up to the adoption of the Protocol, nor in their later incorporation into Annex II of the Protocol, was any attempt made to establish what criteria should be used for designating a Specially Protected Species nor what special protection should then be accorded to them by Parties. No species have been added to the original list accepted in 1964.
3. As part of the revision of Annex 2 the United Kingdom presented ATCM XXIII WP24, which questioned how this category of special protection should be defined and managed. This resulted in the adoption of Resolution 2 (1999) which requested SCAR, in consultation with the Parties, CCAMLR and other expert bodies as appropriate, to examine the status of the species currently designated in Annex II Appendix A, with the assistance of IUCN, to determine the conservation status of native Antarctic fauna and flora and advise the CEP on which species should remain or be designated as Specially Protected Species.
4. At XXIII ATCM an Intersessional Contact Group, chaired by Argentina, was established to discuss the criteria that could be used to designate Specially Protected Species. This ICG reported initially at CEP IV through ATCM XXIV WP5.
5. The Final ICG report was presented as ATCM XXV WP8. The advice to the ATCM was encapsulated in Resolution 1 (2002) which noted that the CEP had decided to adopt the IUCN criteria on endangerment to establish the degree of threat to species, requested SCAR to assist in reviewing those species which were classed as "vulnerable", "endangered" or "critically endangered" (taking into consideration regional assessments of populations), as well as reviewing those species classed as "data deficient" or "near threatened" which occurred in the Antarctic Treaty Area.
6. SCAR agreed to begin this process and suggested that it would first assess the species for which there were already extensive data. Working Paper ATCM XXVIII WP34 proposed how the IUCN criteria could be applied to Antarctic bird species and provided a classification of threat for endangered bird species. The paper then suggested a procedure and provided a format, using data for the southern giant petrel as an example, for the process by which future proposals could be made to the Committee for Environmental Protection for listing species as Specially Protected Species.
7. At XXIX ATCM SCAR tabled WP38 proposing that, on the basis of an earlier review by Birdlife International, the southern giant petrel met the global criteria for the Vulnerable category of endangerment and should be designated as Specially Protected Species. However, after the paper was submitted new survey data became available from populations outside the Antarctic Treaty area, which indicated that a re-assessment of global endangerment was necessary in the light of the substantially increased global population. SCAR recommended that the proposal be re-submitted at XXX ATCM after discussion with Birdlife International.
8. The re-assessment has shown that the species is not at present endangered at the global level and will not therefore be included in the Red Data Book listing. However, if the population within the Antarctic is viewed as a regional population there is significant cause for concern. This paper lays out the details to support the designation of southern giant petrel as regionally endangered and proposes designation as a Specially Protected Species on regional grounds.

Setting the Criteria

9. The CEP has already accepted the IUCN endangerment criteria as the framework within which to consider threats to Antarctic species. The full current listing of the criteria is provided as Annex 1.
10. The IUCN criteria are well-established, universally recognized and applied, and have been in use for a sufficient time to validate their usefulness and applicability at a global level. The application of the criteria at regional scales has been undertaken for almost a decade, and the methodology is addressed in a separate Working Paper.
11. IUCN use three categories for species considered to have a high to extremely high risk of extinction ("threatened" species) – Critically Endangered, Endangered and Vulnerable. A fourth category – Near Threatened – applies to species close to qualifying as threatened in the near future if the threatening process(es) continue. It is unlikely that many Antarctic species will meet the global criteria for Critically Endangered or Endangered status within the Treaty area, although some species may meet these criteria in regional assessments. On conservation grounds, it is considered appropriate to be able to designate species in all three threatened categories (Critically Endangered, Endangered and Vulnerable) as Specially Protected Species. This would provide an effective framework for developing and implementing management plans to improve the status of all threatened Antarctic species. It may also be appropriate to establish monitoring schemes for those species evaluated as Near Threatened in order to provide early warning of possible worsening conservation status.
12. SCAR considers that, at least at present, the Specially Protected Species category should be applied for the whole Antarctic population of any species and not for any smaller geographical unit. If populations of some species not endangered at a global level do show regional decreases within the Antarctic that give cause for concern, protection may be achieved either by practical local means or by designation of the Regional population as a Specially Protected Species.
13. Designating Specially Protected Species in cases where not enough information is available (the precautionary approach applied for Data Deficient species) is not considered appropriate at the moment. Concern for these species should initially trigger new efforts to obtain the necessary information on the distribution, abundance, and where possible, trends in extent and population, upon which an informed judgement can be based through the application of the IUCN criteria. The regular review of all Antarctic bird species will provide a timely indication of which species are in need of urgent study.
14. Considering the present limited level of agreement on the extent of the revision of Annex II acceptable to all Parties, SCAR suggests that the Specially Protected Species status should be available for all species covered by Annex II, including those migratory species that visit the Antarctic Treaty Area on a seasonal or annual basis. This would appear to be within the common ground established at previous meetings of the CEP and provides for links with associated and dependent ecosystems outside the Treaty Area.
15. SCAR is continuing to build databases on the distribution, populations and ecological characterisation of species found not only in the Treaty and CCAMLR areas but associated and dependent ecosystems farther north. In many cases these data can already be linked with databases held elsewhere to provide global summaries for species. It is assumed that all these available data will be used to assess the degree of endangerment.
16. General agreement is needed first on the grounds for exclusion of any group of organisms or particular species from this designation. Such grounds could include the application of existing legislation outside the ATS, restriction of the designation only to those species breeding south of 60°S, etc. As suggested above it would appear that migratory species and those that use the Antarctic Treaty Area for substantive foraging could be included under a recognition of their importance in associated and dependent ecosystems.

Assessment of the Degree of Endangerment for Southern Giant Petrel

17. In the discussions at CEP VII a range of suggestions was made on how to regularise the proposals for listing and de-listing. The IUCN criteria used worldwide to identify species in need of special protection have been considered in detail at previous meetings. For the purposes of assessing the degree of threat or endangerment for any species four characteristics are critical:

a. How large is the population and is it, either globally or regionally, increasing, stable or decreasing?
b. Is the geographic spread increasing, stable or decreasing?
c. Is the breeding population sufficient to ensure breeding success each year (for an annual breeder)?
d. Are there any known threats to the stability of the population?

18. SCAR has used the format agreed at that meeting to address the listing of the most endangered bird species from the Antarctic Treaty Area, the southern giant petrel. The key questions in the assessment process agreed are answered in the following paragraphs with detailed data supplied in Appendix 1.

19. *Based on the application of IUCN global criteria is the species currently on the Red List?* **No. Until 2006, southern giant petrels were globally listed as Vulnerable by BirdLife International, but recent survey data on populations outside the Antarctic Treaty Area have required a re-assessment and their present global category is now considered to be Near Threatened.**

20. Based on the application of IUCN regional criteria how should the Antarctic population be treated? **Banding data suggest that southern giant petrels breeding southward of the Antarctic Polar Front (equivalent to the Antarctic Convergence) are a series of sub-populations forming a discrete breeding population separate from the remainder of the global population elsewhere throughout the Southern Ocean.**

21. *Based on the IUCN regional criteria does the conservation status indicate a significant risk of extinction? E.g. is the conservation status "vulnerable" or higher?* **Consideration by the SCAR Expert Group on Birds, IUCN and BirdLife International of Antarctic population data for southern giant petrels has concluded that** the species meets the criteria for Critically Endangered at the Regional Antarctic level. This assessment was based on an overall decreasing population (90% decrease over 64 years, equivalent to three generations) at Antarctic breeding sites, and an apparent lack of interchange between populations breeding south and north of the Antarctic Polar Front. **Data in Appendix 1**.

22. Does the proposal involve a species of interest to other authorities or organisations (e.g. sea birds) in regard to active protection?
Yes. Southern giant petrel is already under consideration by ACAP as an endangered species. It has also been designated for special protection in those areas covered by Australian law.

Recommendation

23. SCAR recommends that those regional populations of southern giant petrel breeding southward of the Antarctic Polar Front be considered for designation as a Specially Protected Species. Any such designation should be congruent with decisions taken by ACAP on this species.
24. In accordance with discussions at CEP such a listing would require the preparation of a Protection Action Plan to allow all Parties to agree on what actions were necessary to conserve the species and assist in the recovery of its threatened populations.
25. A draft Protection Action Plan is attached as Appendix 2 for discussion. It is based on an Australian plan already in use for its subantarctic territories.
26. SCAR should provide periodic reports on Specially Protected Species to allow the CEP to judge the success of the Protection Action Plan.

Appendix 1
Data for the Southern Giant Petrel

Species: *Macronectes giganteus* (southern giant petrel)

Species characteristics: The southern giant petrel *Macronectes giganteus*, is a large seabird of body length 85–100cm and wingspan 150–210cm. The species is sexually dimorphic, with males larger than females. Within populations, two colour morphs occur: the most common is the dark morph with a white head and neck, and a dark grey-brown body; and a white morph with scattered black feathers.

Distribution: The southern giant petrel has a circumpolar oceanic range from Antarctica to approximately 20°S. Southern giant-petrels range widely throughout the southern oceans. In summer they occur predominantly in sub-Antarctic to Antarctic waters. Some adults are mainly sedentary, remaining close to their breeding islands throughout the year. Nonetheless, numbers diminish at all sites over winter - the Antarctic colonies being completely abandoned. Throughout the colder months, the immatures and most adults disperse widely. The dispersal is circumpolar, extending north from 50° S to the Tropic of Capricorn and sometimes farther north. Thus, in winter they are rare in the southern waters of the Indian Ocean, and more common off South America, South Africa, Australia and New Zealand. The mean foraging range of breeding adults during the breeding season may vary markedly from around 50km to nearly 2000km.

Habitat and Breeding: Over summer, the species nests in colonies amongst open vegetation on Antarctic and subantarctic islands. Nests on the Antarctic Continent are composed of pebbles. A single chick is raised and although breeding occurs annually, approximately 30% of the potential breeding population does not nest annually. Breeding success ranges from 34-69%. At 6-7 years of age the birds return to their natal colony as reproductive adults. Birds have been recorded living for more than 30 years.

Role of species in ecosystem: The southern giant petrel is an opportunistic scavenger and predator. The species regularly attends fishing vessels and scavenges animal carcasses on land. Southern giant petrels are also an active predator of cephalopods and euphausiids, as well as smaller birds (particularly penguins and petrels) both on land and at sea.

Status and trends

Habitat trends: There are no data available to indicate a reduction in available nesting habitat on the subantarctic islands, on the Antarctic Peninsula and Antarctic Continent.

Population size and trends: The current global population of southern giant petrels is now estimated to be around 46,000 breeding pairs (BirdLife International). This estimate represents a population increase of approximately 21% from a previous estimate of 38,000 pairs (Hunter 1985). Populations within the Antarctic Polar Front appear to be separate from the rest of the global population with little/no?? evidence of interbreeding. Data for the subAntarctic and Antarctic sites show that the largest part of the regional population (c.80%) has a decreasing trend and model calculations suggest that up to 90% of the regional population could be lost within three generations.

Antarctic Regional Population Estimates, and Breeding Population Trends for southern giant petrels

Region	Estimated breeding population (pairs)	Trend(s)
Indian Ocean islands*	9500	Stable or Decreasing
Antarctic Continent	270-280	Recovering after decreases, stable after decreases
Antarctic Peninsula	1000	Stable or decreasing
South Shetland Is	4500	Decreasing
South Orkney Is	3400	Decreasing based on incomplete data
Elephant & Seal Is	875	Insufficient data
South Sandwich Is	1550	Insufficient data

South Georgia	4650	Decreasing

* Comprises Bouvet, Marion & Prince Edward Is, Iles Crozet, Heard & McDonald Is, Iles Kerguelen & Macquarie Is

Threats: A significant threat to southern giant petrels is mortality via long-line fishing. 'Incidental catch (or by-catch) of seabirds during oceanic long-line fishing operations' is an increasingly important source of loss in many Southern Ocean bird populations. On some of their breeding islands, southern giant petrels are threatened by predation from feral cats and black rats, and by habitat degradation from introduced Reindeer, Sheep and Rabbits. Human disturbance, both from tourism, science and logistic operations also results in breeding failure. Environmental changes potentially exacerbate the impact of threats to the southern giant petrel. A recent southerly shift in the Antarctic Polar Frontal Zone has resulted in increased sea and air temperatures and may have altered up-welling patterns and hence marine prey availability (Patterson et al., in press.).

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Appendix 2
Draft Protection Action Plan for Southern Giant Petrels within the Antarctic Treaty Area

Specific Objectives

The Specific Objectives of this Plan are to:

A. Quantify and reduce the threats to the survival and breeding success of southern giant petrels within the Antarctic Treaty Area, and
B. Quantify and reduce the threats to the foraging habitat of southern giant petrels within the Antarctic Treaty Area; and
C. Maintain existing breeding population monitoring programs for southern giant petrels within the Antarctic Treaty Area; and
D. Work with CCAMLR to educate fishers, and with IAATO to promote visitor awareness of the threats to southern giant petrels within the Antarctic Treaty Area; and
E. Link this Plan with conservation efforts for southern giant petrels undertaken by national government on the Subantarctic islands and by ACAP at an international level; and
F. Assess and revise this Protection Action Plan as necessary

Recovery and Management Actions

This Plan seeks to minimise (or eliminate) all human-induced threats to southern giant petrels to ensure their recovery in the wild.

The key issues to emerge as threats are longline fishing (Gales 1998) and human disturbance at breeding colonies (Woehler et al. 2003).

It is likely that southern giant petrels are threatened by other factors for which data are not yet available. This emphasises the need for further research into the factors affecting survival of giant-petrels and reproductive success. This current lack of quantitative evidence should not prevent the implementation of actions that may ameliorate preventable threats to giant-petrels and continuing monitoring of breeding populations is required to assess the success of the Plan.

	Fisheries Action	***Measure of success***
1.1	With CCAMLR minimise the bycatch of southern giant petrels during longline fishery operations.	Decreased reporting rates of by-catch of giant-petrels from vessels with independent observers on board.
1.2	Determine in more detail the foraging ranges and at-sea distributions of southern giant petrels from a range of breeding sites	More data are publicly available on foraging ranges and at-sea distributions of southern giant petrels.
1.3	Integrate monitoring of the frequency of fishing equipment ingestion / entanglement with breeding population monitoring programs	Fishing equipment ingestion / entanglement at breeding colonies is monitored, quantified and the data are publicly available in addition to population data
1.4	In conjunction with CCAMLR, continue to collect, collate and analyse data regarding incidental mortality of southern giant petrels associated with southern Ocean fisheries	The incidental mortality associated with fishing operations is monitored and quantified, and the data are publicly available.
1.5	Consult with CCAMLR on an education strategy aimed at commercial fishers to encourage the implementation of simple b	An effective education strategy is developed and is distributed to fishers.

	encourage the implementation of simple by-catch mitigation measures.	
1.6	In conjunction with CCAMLR, design and implement an education strategy aimed at commercial and recreational fishers to discourage the intentional killing of giant petrels.	An effective education strategy is developed and is distributed to fishers.
1.7	In conjunction with CCAMLR, implement an education strategy aimed at commercial and recreational troll fishers to encourage them to set their fishing lines at least 2m below the surface of the water.	An effective education strategy is developed and is distributed. Reported rates of lines set at least 2m below surface increase.
	Other Actions	***Measure of success***
2.1	Work with national authorities to prevent the introduction of feral species to all southern giant petrel breeding sites southward of the Polar Front and to remove existing feral species that disturb the birds.	Fewer breeding sites are host to feral species, and increased efforts undertaken to remove extant populations of feral species that affect giant petrels.
2.2	Encourage the preparation of educational material regarding the impacts of human disturbance on giant petrels, particularly at breeding sites.	Education material is prepared and distributed as appropriate.
2.3	Restrict access to all major breeding sites (>100 breeding pairs) within the Treaty Area	Access to breeding sites is restricted to appropriate permit holders only.
2.4	Restrict the construction of further infrastructure on or near southern giant petrel breeding sites	Guidelines restricting the construction of further infrastructure on or near breeding sites are developed, distributed and adopted
2.5	IAATO to regulate to prohibit the intentional provisioning of seabirds during tourist operations.	The intentional provisioning of food sources to seabirds during tourist operations is prohibited.
2.6	IAATO to restrict access to breeding site by visitors where it would disturb breeding. Restrictions would include approach distance guidelines, frequency of visitation, numbers of visitors per party.	Restrictions adopted by IAATO operators.

ANNEX 1

Summary of the five criteria (A-E) used to evaluate if a species belongs in a category of threat (Critically Endangered, Endangered or Vulnerable).

Use any of the criteria A-E	**Critically Endangered**	**Endangered**	**Vulnerable**
A. Population reduction Declines measured over the longer of 10 years or 3 generations			
A1	_ 90%	_ 70%	_ 50%
A2, A3 & A4	_ 80%	_ 50%	_ 30%
Al. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible **AND** understood **AND** have ceased, based on and specifying any of the following:			
	(a) direct observation		
	(b) an index of abundance appropriate to the taxon		
	(c) a decline in AOO, EOO and/or habitat quality		
	(d) actual or potential levels of exploitation		
	(e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.		
A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under Al			
A3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under Al.			
A4. An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under Al.			
B. Geographic range in the form of either B1 (extent or occurrence) AND/OR B2 (area or occupancy)			
B1. Extent of occurrence	< 100 km_	< 5,000 km_	< 20,000 km_
B2. Area of occupancy	< 10 km_	< 500 km_	< 2,000 km_
AND at least 2 of the following:			
a (i) Severely fragmented **AND/OR** (ii) # locations	= 1	≤ 5	≤ 10
b Continuing decline in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
c Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals			

C. Small population size and decline			
Number of mature individuals	< 250	< 2,500	< 10,000
AND either C1 or C2:			
C1. An estimated continuing decline of at least: (up to a maximum of 100 years)	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
C2. A continuing decline **AND** (a) and/or (b):			
a (i) # mature individuals in each subpopulation:	< 50	< 250	< 1,000
a (ii) or % individuals in one subpopulation at least	90%	95%	100%
b extreme fluctuations in the number of mature individuals			
D. Very small or restricted population			
Either:			
D1. number of mature individuals	≤ 50	≤ 250	≤ 1,000
AND/OR			
D2. restricted area of occupancy	na	na	AOO < 20 km_ or # locations ≤ 5
E. Quantitative Analysis			
Indicating the probability of extinction in the wild to be:	_ 50% in 10 years or 3 generations (100 years max)	_ 20% in 20 years or 5 generations (100 years max)	_ 10% in 100 years