



## ANTARCTIC TREATY CONSULTATIVE MEETING 2006

WP 39

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### **Proposal to De-list Antarctic Fur Seals as Specially Protected Species**



## Proposal to De-list Antarctic Fur Seals as Specially Protected Species

### Introduction

1. At III ATCM in 1964 the Parties addressed conservation issues for the first time and approved the Agreed Measures for the Conservation of Antarctic Flora and Fauna. In its Annex A were listed those species which were to be designated as Specially Protected Species. These comprised “All species of the genus *Arctocephalus*, Fur Seals” and “*Ommatophoca rossii*, Ross Seal”.
2. At that time it appeared to at least some of the Parties that there was a pressing need to draw attention to the need to protect these particular species, Fur Seals because they had been previously hunted almost to extinction and Ross Seals as they appeared to be exceptionally rare and very little was known about them. However, no criteria were ever formally agreed or published to indicate precisely why or how these species were selected.
3. There appears to have been no further discussions on Specially Protected Species *per se*, although the seals were considered again when the Convention for the Conservation of Antarctic Seals (CCAS) was drafted. When the Agreed Measures were used as the basis for drafting Annex II of the Protocol in 1991 there was no specific discussion about the species listed in Annex A and they were therefore automatically incorporated into the legislation.
4. It has been generally assumed by conservationists worldwide that classification as a Specially Protected Species is a status that is only afforded to the most vulnerable and endangered species. Elsewhere in the world considerable effort over several decades has gone into reaching international consensus on criteria for determining this category of threat, and on the management actions that might be taken to assist the recovery of a Specially Protected Species.
5. No such definitions or discussions took place at the ATCM until 1999 when XXIII ATCM/WP24 was presented by the UK. The outcome of these discussions was Resolution 2 XXIII ATCM requesting SCAR, in consultation with other expert bodies, to review the status of species listed as Specially Protected Species and provide scientific advice to the Committee for Environmental Protection. An Intersessional Contact Group was established to provide a forum for discussion, and this reported at XXIV ATCM/WP5 and at XXV ATCM/WP8 through Argentina.
6. These Working Papers focussed on the criteria needed to provide an objective basis for selecting species for listing. They did not provide any proposals for de-listing of species once they were no longer under threat.
7. At XXVII ATCM SCAR was asked to examine the available data for the species currently in Annex A and provide a recommendation on the future of these listings. It provided a paper at ATCM XXVIII (WP 33) reviewing the data for Fur Seals, and recommended that, on the basis of their present populations and the trends of these populations, they could not be considered in any way threatened or endangered under the IUCN criteria. They were therefore no longer in need of special protection and should be delisted.
8. This proposal was supported by some Parties whilst others requested that SCAR provide further information, ensuring that the data assessed included all available data and that CCAMLR be consulted over seal mortality in CCAMLR fisheries. This paper provides the evidence in a format agreed at CEP VIII and recommends that Fur Seals be delisted.

### The Existing Situation

9. Five species of true seals (Family Phocidae) and two species of eared seals (Family Otariidae) spend all or some of their lives in areas governed by the Antarctic Treaty and derivative Conventions and

Protocols. Within the Antarctic Treaty Area (and the broader area encompassed by the Convention on the Conservation of Antarctic Marine Living Resources [CCAMLR]), each of these seven species is a “native mammal” (as defined in the Protocol on Environmental Protection to the Antarctic Treaty) and all are included generally in conservation and protection measures articulated by the Convention for the Conservation of Antarctic Seals (CCAS). Ross seals, southern elephant seals, all species of southern fur seals (genus *Arctocephalus*), and components of populations of Weddell seals are designated as “Protected Species” under CCAS but none of the species of Antarctic seals has so far been designated as a “protected species” under CCAMLR. All species of southern fur seals (genus *Arctocephalus*) and Ross Seals are designated as “Specially Protected Species” under Annex II Appendix A of the Protocol on Environmental Protection to the Antarctic Treaty.

10. Neither in the Agreed Measures nor in Annex II of the Protocol are any criteria provided for the selection of specially protected species, which are defined simply as “those listed in Annex A”.
11. None of the seven Antarctic seals that occur in the Antarctic Treaty Area or in the CCAMLR area are included on the IUCN Red List of Threatened Species.

### Criteria for assessing species for designation as Specially Protected

12. 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 or decreasing?
  - b. Is the geographic spread increasing 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?
13. In Annex 8 of the Report of CEP VIII an assessment process was outlined for listing or delisting species. The following paragraphs address the questions detailed there
14. *Based on the application of IUCN criteria are the species currently on the Red List? No.*
15. *Based on the IUCN criteria does the conservation status indicate a significant risk of extinction? E.g. is the conservation status “vulnerable” or higher? Data in Appendices A and B indicate that global populations of adults are large, pup numbers show that they are continuing to increase year on year (although there are fluctuations at particular sites) and for *Arctocephalus gazella* the species has greatly extended its geographical coverage in the Antarctic Peninsula (both in terms of foraging and breeding). There is no risk of extinction. The breeding population is clearly more than adequate to ensure widespread breeding success in all normal krill years. Observations show that in low krill years pup mortality at some sites can be very high but this has done nothing on a decadal basis to halt the upward population trend. There are no significant predators for either species and data provided by CCAMLR show that mortality in fishing nets is negligible. There are no proposals for a commercial take of Fur Seals (which would in any case be covered by CCAS and would be subject to the application of CCAS rules to establish if a sustainable take was possible) and the only limits to the population would appear to be the availability of food supplies and breeding beaches.*
16. Under the system of listing now agreed at CEP these two species cannot be classified as in any way vulnerable or endangered.

### Recommendations

17. SCAR recommends that the application of the criteria for endangerment devised by IUCN are a logical and scientific way for the CEP to judge the need for conservation measures. Special Protection for a species is normally used as a temporary designation to allow for special measures for the recovery of

the population(s) under threat, and once the species is no longer endangered or threatened the designation is removed.

18. SCAR recommends that the ATCM recognise the remarkable recovery of the populations of fur seals as a major conservation success, attributable to the concerted actions taken nationally and internationally to rescue heavily exploited populations from probable extinction.
19. On the basis of the current population estimates, the continuing upward trend for the population, the continuing extension of the geographical area inhabited and the lack of any threats to the stability of the populations SCAR recommends that *Arctocephalus gazella* (Antarctic fur seal) does not require a Protection Action Plan, is not in need of any Special Protection and should be removed from Annex A of Annex II of the Protocol.
20. On the basis of the current population estimates, the continuing increase in the population, the geographical area inhabited and the lack of any threats to the species SCAR recommends that *Arctocephalus tropicalis* (Subantarctic fur seal) does not require a Protection Action Plan, is not in need of any Special Protection and should be removed from Annex A of Annex II of the Protocol.
21. As these are the only two species of this genus in the Antarctic Treaty Area the wording in Annex II Appendix A of “All species of the genus *Arctocephalus*” can therefore be removed. The species will continue to have all the general protection afforded under the Protocol and Annex II even after this change. This change in wording has no implications for those species of the genus that occur only outside the Antarctic Treaty Area and are covered by other national or international instruments for conservation and management.

## Appendix A

**Species:** *Arctocephalus gazella* (Antarctic fur seal)

### Species characteristics

*Distribution:* Breeding colonies occur at islands scattered around the Southern Ocean, but principally in the South Atlantic (including the Antarctic Peninsula down to Marguerite Bay) and southern Indian Ocean sectors south of the Antarctic Polar Front. The primary colony is on Bird Island (near South Georgia) where about 90% of the species breeds. During the breeding season the foraging distribution of lactating females is relatively near the breeding colonies. The whereabouts of non-breeding seals during that time is unknown, but they are presumably widespread judging by recent data on foraging areas of seals during the non-breeding season when they range widely in the Southern Ocean including south to the pack ice.

*Habitat:* Breeding and resting habitat includes cobble and rocky coastal beaches but also tussock grass and inland grassy meadows, where fur seals have been documented to have substantial impacts on terrestrial habitats directly through trampling and consequent erosion and by enrichment of soils from their faeces and urine. Their foraging habitat at sea may vary depending on geographic location and prey community composition from shallow water epipelagic to pelagic habitats, near breeding colonies and at great distances from colonies evidently correlative with oceanographic (eg up-welling and down-welling areas at current boundaries, eddies) and bathymetric (ridges, seamounts, shelf breaks) features.

*Role of species in ecosystem:* Antarctic fur seals are key predators of krill in some areas and various species of fishes, squids, and invertebrates. Short term changes in environmental conditions with correlative changes in composition and abundance of prey communities near breeding colonies have been found to have substantial short-term effects on reproductive success of females at some sites, suggesting that the size of breeding colonies may be primarily limited and regulated by local prey resource type and quantity.

### Status and trends

*Habitat trends:* Breeding habitat is still being colonized at most Southern Ocean Islands while densities at extant colonies continue to increase. The extent of foraging ranges of seals during the breeding and non-breeding seasons has only recently been documented, but continuing studies are revealing the characteristics of those ranges for males and females of various ages and reproductive status in several regions. Antarctic fur seals appear to be far ranging in the Southern Ocean during most of the year.

*Population size and trends:* The species was reduced to perhaps 3,000 or fewer seals in the 1800s but began increasing at relatively high rates relatively soon after commercial sealing ended and is estimated to number between four and seven million animals. The errors on estimating adult populations of this size are considerable which is why figures for annual pup production are given where available. For long-lived animals these are a more accurate indication of population trends. Whilst there are years of major pup mortality associated with krill shortage this has not checked the continuing growth of the South Georgia population. Whilst there have been declines measured at a few smaller sites, and numbers can fluctuate from year to year (as seen at Signy Island where almost all the population is made up of young males displaced from South Georgia), it continues to increase in abundance at most sites, with measured rates of increase exceeding 10% at many. Many of the rookeries listed are quite small as the species continues to spread out from South Georgia and colonise new areas. The most important value is the current estimate for South Georgia which is where over 80% of the population is found and there the trend year on year is upwards.

*Geographic trends:* Breeding colonies are now established at South Georgia, the South Sandwich Islands, South Orkney Islands, South Shetland Islands, Bouvetøya, Prince Edward and Marion Islands, Iles Crozet, Iles Kerguelen, McDonald Island, Heard Island, and Macquarie Island. The largest colony is at South Georgia (Bird Island), which was estimated to number between 4.5 and 6.2 million seals in the late 1990s, and is still increasing. Reproduction along the Antarctic Peninsula continues to increase at high

rates and the smaller colonies in the Indian Ocean and South Pacific Ocean sectors of the Antarctic continue to increase in range and number at those islands.

*Threats:* There are no identifiable threats to the species vitality although changes in krill availability linked to ENSO have been observed to cause significant pup mortality in occasional years. Commercial fishing activities have recorded mortalities of fur seals in nets of less than 10 per annum and there are occasional cases reported of entanglement in marine debris, which may lead to death. Changes in the marine ecosystem linked to global climate change may force foraging and breeding changes in the next 100 years but these cannot yet be predicted.

Table 1. Estimated sizes and trends of Antarctic fur seal (*Arctocephalus gazella*) populations.

Site	Pup numbers	Total population	Year of census	Mean annual rate of change	Reference
Macquarie Island	152 <sup>a</sup>		1999/00	increasing (1988/89 to 99/00) <sup>a</sup>	Goldsworthy (pers. comm.)
	165 <sup>a</sup>		2003/04	stable	Goldsworthy (pers. comm.)
Heard Island	248		1987/88	+ 23% (1962/63 to 87/88)	Shaughnessy (1993)
	1,012		2000/01	+ 12.0 % (1986/87 to 2000/01)	Page <i>et al.</i> (2003)
	1,278		2003/04	+ 8.1% (2000/01 to 2003/04)	Goldsworthy (pers. comm.)
McDonald Island	100	300	1979/80	increasing	Johnstone (1982)
Iles Nuageuses (Iles Kerguelen)	2,500 <sup>c</sup>		1984/85	increasing	Jouventin and Weimerskirch (1990)
	5,000	?	2000	increasing	Lea (pers. comm.)
Courbet Peninsula (Iles Kerguelen)	2	1,332	1984	Increasing	Bester and Roux (1986)
	>200	?	1998	Increasing	Guinet (pers. comm.)
	1,500-1,700	?	2000	increasing	Lea (pers. comm.)
Ile de la Possession (Iles Crozet)	67	?	1992/93	+ 21.4% (1983 to 92)	Guinet <i>et al.</i> (1994)
	234	?	1999/00	+ 16.9% (1992 to 1999)	Guinet (pers. comm.)
	295	?	2003/04	+ 5.9% (1999/00 to 2003/04)	Guinet (pers. comm.)
Marion Island	251 <sup>c</sup>	1,205 <sup>d</sup>	1994/95	+ 17% (1988/89 to 94/95)	Hofmeyr <i>et al.</i> (1997)
	796 <sup>c</sup>	3,821	2003/04	+13.8% (1994/95 to 2003/04)	Hofmeyr <i>et al.</i> In preparation-a
Prince Edward Island		200	1981/82	increasing	Kerley (1983)
	400	2000 <sup>l</sup>	2001/02	+ 16.2%	Bester <i>et al.</i> (2003)
Nyrøysa (Bouvetøya)	2,000	>9,501	1989/90	+7.0% (1978/79 to 89/90)	Bakken (1991)
	15,523 <sup>c</sup>	66,128	2001/02	+0.1% (1996/97 to 2001/02)	Hofmeyr <i>et al.</i> In preparation-b
South Georgia	<600,000 <sup>c</sup>	2,700,000 <sup>f,g</sup>	1990/91	+ 9.8% (1976/77 to 90/91) +6% to 14%	Boyd (1993)

		4,500,000 -6,200,000 <sup>f,g</sup>	1999/00	(1990/91 to 99/00)	Boyd (pers. comm.)
South Sandwich Islands	<500 346	<2,000	1962/63 1997/98	? stable	Holdgate (1962) Boyd (pers. comm.)
Signy Island, South Orkney Islands	<10 <10	10091 10428	2001 2006	stable	British Antarctic Survey (unpublished)
South Shetland Islands	9,300  10,057 <sup>h</sup>		1991/92-95/96  2000/01	+ 11% (1994/95 to 95/96)  + 0.9% (1995/96 to 01/02)	J.L. Bengtson and D. Torres (pers.comm), Aguayo <i>et al.</i> (1992) Goebel <i>et al.</i> (2003)
Cape Shirreff (SSSI	5,313		1991/92	+ 14% <sup>i</sup> (1986/87 to 91/92)	Hucke-Gaete (1999)
No 32, S. Shetland Is.)	8,455  8,577		1999/00  2001/02	+ 6% <sup>i</sup> (1991/92 to 99/00)  +4.6% <sup>i</sup> (1992/93 to 2001/02)	Hucke-Gaete (pers. comm.), Vallejos <i>et al.</i> (2000) Hucke-Gaete <i>et al.</i> (2004)

a - For populations of both *A. tropicalis* and *A. gazella*  
b - Corrected for observer undercount  
c - Corrected for precount mortality  
d - Recalculated from population values in publication  
e - Number of breeding females

f - Estimated from the number of breeding females  
g - Standard deviation = 300,000  
h - Standard error = 140  
i - Calculated from pup counts

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## **Appendix B**

**Species:** *Arctocephalus tropicalis* (Subantarctic fur seal)

### Species characteristics

*Distribution:* Breeding colonies of subantarctic fur seals are widely distributed in the Southern Ocean and virtually all are on subantarctic islands north of the Subtropical convergence. The principal colonies are at Gough Island in the South Atlantic Ocean and at Amsterdam Island in the Indian Ocean with smaller colonies farther south at Marion and Prince Edward Islands, Iles Crozet and Macquarie Island. Seasonal haul-outs occur at several other sites including Heard Island. The distribution of seals when at sea is still poorly known.

*Habitat:* When on land subantarctic fur seals prefer rocky coastal habitats when breeding and tussock slopes above beaches when resting or not breeding. Their foraging habitat at sea presumably includes epipelagic and mesopelagic habitats based on dietary data.

*Role of species in ecosystem:* Subantarctic fur seals appear to be key predators in regional marine ecosystems though their role in structuring the biological communities in those systems is not clear.

### **Status and trends**

*Status:* The species was nearly extinguished by commercial sealing in the 1800s but began recovering in the 20<sup>th</sup> century once commercial harvests had ended

*Habitat trends:* Subantarctic fur seals continue to increase in density at virtually all extant breeding sites and to colonize new island habitats. The colony at Amsterdam Island appears to be stable, an exception to the general pattern elsewhere (see Roux 1987).

*Population size and trends:* The species is estimated to number around 300,000 and increasing at overall rates of 5 to 10% but exceeding 20% at some sites.

*Geographic trends:* Colonies of subantarctic fur seals are increasing in size at all established colonies except at Amsterdam Island where births may have stabilized.

*Threats:* There are no significant threats to this top predator. Very small numbers may die by entanglement in fishing nets or in marine debris but insufficient to have any effect of the population growth.

Table 2. Estimated sizes and trends of subantarctic fur seal (*Arctocephalus tropicalis*) populations.

Site	Pup numbers	Total population	Year of census	Mean annual rate of change	Reference
Macquarie Island	152 <sup>a</sup>		1999/00	increasing (1988/89 to 99/00) <sup>a</sup>	Goldsworthy (pers. comm.)
	165 <sup>a</sup>		2003/04	stable	Goldsworthy (pers. comm.)
Heard Island	1	13	1987/88	?	Goldsworthy and Shaughnessy (1989)
	1		2000/01		Page <i>et al.</i> (2003)
	1		2003/04		Goldsworthy (pers. comm.)
Ile Amsterdam	>9,638 <sup>b</sup> (partial census)		1992/93	+ 0.4% (1981/82 to 92/93) <sup>e</sup>	Guinet <i>et al.</i> (1994)
			2002/03	Stable 1992/93 to 2002/03	Guinet (pers. comm.)
Ile Saint Paul	365		1992/93	+ 23.8% (1984/85 to 92/93) <sup>e</sup>	Guinet <i>et al.</i> (1994)
Ile de la Possession (Iles Crozet)	190		1990/91	+ 21.6% (1978-91) <sup>e</sup>	Guinet <i>et al.</i> (1994)
	251		1999/00	+ 3.1% (1990/91-1999/00) <sup>e</sup>	Guinet (pers. comm.)
	322		2003/04	+6.4% (1999/00-2003/04)	Guinet (pers. comm.)
Marion Island	10,137 <sup>c,d</sup>	48,658	1994/95	+ 1.8% (1988/89 to 94/95)	Hofmeyr <i>et al.</i> (1997)
	14,915 <sup>c,d</sup>	71,591	2003/04	+4.2% 1994/95 to 2003/04	Hofmeyr <i>et al.</i> In preparation
Prince Edward Island	5,372 <sup>c,d</sup>		1988/89	+ 9.7% (1981/82 to 88/89)	Wilkinson and Bester (1990)
	15,000 <sup>f</sup>			+ 9.5% (1987/88 to 2000/01)	Bester <i>et al.</i> (2003)
Gough Island	>53,076 <sup>b,c,d</sup>		1977/78	+ 14.9% (1955 to 1977/78) <sup>e</sup>	Bester (1987)
Tristan da Cunha	50	250	1993/94	Increasing	C. Glass (pers. comm.)
	?	700	1998/99	Increasing	C. Glass (pers. comm.)
Inaccessible Island (Tristan da Cunha Group)	>3	>200	1999/00	Increasing	P.G. Ryan (pers. comm.)

- a - For populations of both *A. tropicalis* and *A. gazella*
- b - Extrapolation based on a proportion of the total populated area
- c - Corrected for observer undercount
- d - Corrected for pre-count mortality
- e - Recalculated from population values in publication
- f - Extrapolated from peak adult male counts, and known adult male:pup ratios, in breeding colonies

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