



**Agreement on the Conservation of Albatrosses and Petrels**

## **Second Meeting of Advisory Committee**

*BRASILIA, BRAZIL, 5 – 8 JUNE 2006*

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### **Report of Working Group On Status and Trends Meeting**

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## REPORT OF WORKING GROUP ON STATUS AND TRENDS MEETING

3 JUNE 2006

### Background

1. The first Session of the Meeting of the Parties (MOP1) of the Agreement on the Conservation of Albatrosses and Petrels agreed to recommend to the Advisory Committee (AC) a proposal to review the population status, trends and demography of albatrosses (21 species) and petrels (seven species) listed on Annex 1 of the Agreement (MOP1 Final Report, Paragraph 7.2).
2. To progress this review, Resolution 1.5 provided for the establishment by the Advisory Committee of a Working Group whose aim is to collect and collate information on breeding numbers and critical population and demographic parameters on each species. It was anticipated that this synthesis would then enable gaps in information to be identified and facilitate the prioritisation of actions to collect information to fill these gaps.
3. The data for this review would be sought from Parties and Signatories to ACAP that are Breeding Range States for the ACAP-listed species. It was agreed that Rosemary Gales (Australia) would chair the Working Group. Working Group members were sought from both breeding-range Parties and non-Party Signatory states. The current membership of the Status and Trends Working Group (STWG) is provided in Attachment 1.

### Progress to date

4. At the first meeting of the AC (AC1) in Hobart in 2005, the Status and Trends Working Group (STWG) had received data for a range of species breeding within the jurisdictions of Australia, New Zealand, South Africa and the United Kingdom. Data from Argentina were presented at the AC1 meeting.
5. Tasks that were identified by AC1 as being relevant to the STWG included:
  - a) Initial analyses should prioritise determination of population trends and trajectories from existing time-series count data (Para 9.3 in AC1 Report)
  - b) Obtain statistical advice to assist in estimating population trends and trajectories from population counts (Para 9.8 in AC1 report).
  - c) SCAR would make compiled data available on ACAP species, especially for Southern Giant Petrels breeding on the Antarctic Treaty Area (see Para 9.9 in AC1 Report).
6. Action 5a) above has been partially achieved through the commitment by France to provide data for populations in their jurisdiction before AC2 (June 2006). This was achieved with France submitting valuable summary data. Raw data as requested were not submitted. Communication is ongoing with the few remaining nations who have not yet provided data.
7. For Action 5b) above at AC1 the UK undertook to provide a paper on estimation of population trends from counts for the forthcoming AC2 meeting. Consequently, UK suggested the possible application of TRIM Software that may achieve the goals of the STWG in seeking to establish trends. This software and the manual are freely available at: <http://firmy.publikuj.cz/EBCC/index.php?ID=13>. It was therefore suggested that members peruse this software prior to the meeting. To further assist in achieving this Action,

Australia commissioned a paper for the STWG to consider that will provide some guidance on the types of statistical analyses that may be most appropriate (AC2 Doc. 32).

8. For Action 5c) above SCAR (through its Group of Experts on Birds convened by Eric Woehler) committed to providing the relevant population data to the WG before AC2. Unfortunately this information remains outstanding.

### **First Meeting of the Status and Trends Working Group, 3 June 2006**

9. A working group meeting was convened on 3 June 2006 in Brasilia, Brazil, to progress the following work items:
  - a. Completion of database to ensure comprehensive coverage of populations for which data exist;
  - b. Determination of appropriate statistical tools to quantify trends;
  - c. Method of appropriate reporting and delivery of synthesised analyses; and
  - d. Identification of gaps in information, and prioritisation of actions to collect information to fill these gaps (as identified in the Terms of Reference of the STWG).
10. The meeting was attended by Members of the STWG from Australia, New Zealand, South Africa and the UK. Observers from Australia, Brazil, New Zealand and UK and USA also attended the meeting. The STWG accepted the proposed agenda and reviewed the membership and provision of data to date (see Attachment 1).
11. South Africa and the UK jointly reported ongoing efforts to collate population and trends data for ACAP species breeding within the UK Overseas Territory of Tristan da Cunha. It is their intention to submit these data to the STWG by the end of 2006.
12. The STWG noted that no data had been submitted by Chile and Ecuador and it was noted that these data are critical for a global assessment of trends. The STWG also noted that the SCAR Group of Experts on Birds (GEB) had not as yet submitted data to the STWG. John Cooper, a member of the SCAR GEB, undertook to organise the submission of data to both the Breeding Sites and Status & Trends databases by the end of 2006. The STWG welcomed and accepted this offer.
13. The STWG also welcomed the provision of data from Argentina and France and noted that these additions significantly enhance the comprehensiveness of the status and trends database. Raw data pertaining to population numbers remain outstanding from France and it was agreed that the WG Chair should request this information from the French STWG member.
14. The STWG considered the frequency of data submission by data holders and agreed that an annual delivery of data is highly desirable. The STWG agreed that a reporting request will be issued each June with a delivery deadline two months after the request is issued. If annual delivery of data is not always possible then the STWG emphasised that outstanding data should be submitted in sufficient time to be analysed before each Meeting of Parties. Annual delivery of information will enable timely to other forums (e.g. CCAMLR) that have an interest in the focus of the WG. If appropriate, timely requests for data submission could be conveyed in ACAP correspondence facilitated by the Secretariat.

### **Summary of trends in populations**

15. The population status and trends summary spreadsheets were updated. For completeness, published information for Chile and Ecuador populations were included in

the absence of data submissions. The Revised and Updated Population Tables was reviewed by the STWG and all members acknowledged the high value of this extremely useful and comprehensive information resource. The information provided was considered in the context of species groups.

16. For the great albatrosses, most populations appear to be stable or increasing. Notable exceptions are the decreasing populations of wandering albatross in the South Atlantic, and the Tristan albatross at Gough Island. Amongst the great albatrosses, the only large populations for which recent data are lacking are Wandering albatrosses at three of the four islands in the Crozet Island group and several peninsulas at the Kerguelen Islands.
17. Grey-headed albatross populations are decreasing at some South Atlantic colonies and Campbell Island, but are considered to be stable at Marion and Macquarie Islands. There are no trend data for Chilean and French islands; for the latter, no recent census data are available.
18. Sooty albatross populations on Marion Island, Crozet and Tristan da Cunha are all reported to be decreasing. Census data do not allow for confident statements on trends for other locations. There are very few population data for Light-mantled sooty albatrosses, with the exception of Marion and Macquarie Islands where the populations are stable and at Ile de la Possession where they are increasing.
19. For black-browed albatrosses, where information is available, all populations over 5000 pairs are declining (South Atlantic colonies). There are no status and trend data for the large Chilean populations.
20. The Campbell albatross population was increasing but data have only been submitted up until 1996. For the Buller's albatross, the Snares and Solander Island populations are increasing, but no recent count data exist for the Chatham Island population.
21. The shy albatross is increasing in numbers on Albatross Island, trend data are not available for the other two breeding localities. No recent population data exist for the White-capped albatross. The Salvin's albatross population is decreasing at the Bounty Islands and stable on the Snare Islands. The Chatham albatross population appears to be stable.
22. Atlantic yellow-nosed albatrosses are decreasing in numbers at Tristan and Gough Islands, whereas for other sites in the Tristan Group data are lacking. For the Indian Yellow-nosed albatrosses overall, data are poor, but the large population at Amsterdam Island is decreasing in size.
23. No data were submitted for the Waved albatross.
24. Where data exist, Southern giant petrel populations are generally stable or increasing with the exceptions of those on Marion Island, Isla Nelson (Argentina) and the Antarctic Peninsula. A recent survey of islands on the Patagonian shelf has revealed a much larger population than was hitherto known.
25. Northern giant petrel populations are increasing at some South Atlantic colonies, where the largest populations exist, are stable at Marion and Macquarie Islands, but are decreasing at Ile de la Possession (Crozet). There are few recent data for other sites.
26. Few population and demographic data are available for the *Procellaria* species. Where information is available, White-chinned petrel populations are reported to be decreasing. The Spectacled petrel population is increasing. Black petrel numbers are stable or

increasing. The Westland petrel has no population size or trend data. Data on population size and trends of grey petrels are insufficient for a summary statement, with the exception of the very small populations on Campbell and Macquarie islands where the populations are reported to be recovering. Both these sites have recently undergone successful removal of introduced predators.

### **Statistical tools to assess population trends**

27. The STWG then considered methods that may be appropriate for assessing trend data and reviewed several alternatives.
28. A report (Woehler et al. 2001) produced by SCAR, on population trends of seabirds within Antarctic Treaty areas, used a Generalised Additive Model (GAM) approach to assess changes in population size with time (trends). This method does not assume the relationship between the population size and time is linear. Only data sets with five or more years of data were analysed using this approach.
29. The TRIM Software implements a log-linear Poisson regression method (a form of Generalised Linear Modelling or GLM) and, given its wide use, could be considered to be an 'industry standard' for assessing trends in wild bird populations from time-series data. The software facilitates the assessment of data from multiple census sites simultaneously. The STWG was advised that the TRIM software is well regarded and based on established statistical theory.
30. The paper "Review of Trends Monitoring Methods as applied to Seabird Populations" (AC2 Doc 32) was presented to the STWG. This paper recognises the utility of using GAM or GLM techniques (also known as 'phenomenological modelling') but recommended an alternative 'population modelling' approach. Essentially, this approach either attempts to estimate the underlying parameters that affect a population's growth rate or, in its most sophisticated form, parameters such as survival, growth and fecundity rates can be integrated into the model which is then used to infer the population's growth rate (trend in population size). Spreadsheets and code can be made freely available to data contributors to implement this approach if necessary.
31. Members of the STWG concluded and agreed that as long as a robust and defensible process is adopted then it was not necessary to decide at this stage which approach was most appropriate. Indeed, more than one approach could be used if this would improve the veracity of the results.
32. To facilitate data analysis, the STWG considered the following options:
  - a. A workshop with data holders and statisticians;
  - b. A analysis by each data holder individually; and
  - c. To employ an appropriate person to complete the analyses while liaising closely with those that have submitted the data.
33. The STWG agreed that this third option was the most desirable approach.

### **Data synthesis and reporting**

34. The STWG discussed options for data synthesis and reporting and agreed that the data are only effective if then they are both analysed and summarised appropriately and made widely available.

35. The Chair tabled a proposal for ACAP to facilitate the creation of an ACAP Species Conservation Assessment for all the ACAP listed species (Attachment 2). These assessments would include a basic description of each species including such information as taxonomy, breeding locations, foraging distribution and overlap with fisheries but also, importantly, would also facilitate the presentation of synthesised analyses of the data collated by both the Breeding Sites and the Status and Trends WGs. These data would include summaries of known threats at each breeding site, current population sizes and population trend data. It was proposed that these Species Assessments would be web-based and housed on the ACAP web site, and also published electronically as Portable Document Format (pdf) files and in hard copy.
36. This proposal was endorsed by all members of the STWG present at the meeting. The proposal was viewed as an important progression in the work of ACAP and would fulfill the consensus reached at AC1 that a comprehensive reporting mechanism should be identified and implemented. Equally importantly, this initiative would facilitate the harmonisation of information resulting from the work of the three current Advisory Committee Working Groups (Status and Trends, Taxonomy and Breeding Sites). The STWG agreed that a proposal including indicative costing be tabled at AC 2 for consideration (Attachment 2).

#### **Future workplan and actions identified**

37. The STWG agreed that the current workplan required revision to reflect the decisions made by the STWG within the meeting. This new workplan that builds upon the progress made to date is presented for consideration by the Advisory Committee (Attachment 3).

#### **Actions by the Advisory Committee**

38. The STWG agreed that substantial progress has been made with most major data holders now having submitted data. To progress adequately the work of the STWG, the WG recommends ACAP Species Conservation Assessments be developed and produced. This initiative will also enhance the synergy between the three current Advisory Committee WGs. Consequently the Advisory Committee is asked to:
- a. Consider the Proposal for ACAP Species Conservation Assessments (Attachment 2);
  - b. Consider and agree to the revised work program for the STWG (Attachment 3);
  - c. Consider whether any changes are required to the Terms of Reference reflecting the progress of the STWG.

**Attachment 1 - STWG members and data provision – June 2006**

(\* indicates 2006 Workshop attendee)

<b>Party/Signatory/ Observer</b>	<b>Member</b>	<b>Organisation</b>	<b>Status of Data Provision</b>
Australia	Rosemary Gales*  CHAIR	Dept of Primary Industries & Water, Tasmania	Data provided up to 2005 season
Ecuador	Gabriela Montoya		No data provided
France	Martine Bigan  Henri Weimerskirch	Ministere de l'ecologie d Developpment Durable CNRS	Summary data provided in May 2006. Raw count data not provided To be requested.
New Zealand	Susan Waugh*	Ministry of Fisheries	Data provided up to 2005 season. Some updates for some species provided in 2006
South Africa	John Cooper* Rob Crawford	University of Cape Town Department of Environmental Affairs & Tourism	Data provided up to 2005 season
United Kingdom	Richard Phillips*	British Antarctic Survey	Data provided up to 2005 season
Argentina	Adrian Schiavini  Maria Laura Tombesi	Southern Scientific Research Centre  Secretary of Environmer and Sustainable Development	Data provided up to 2005 season
Chile	Marcelo Garcia Alvarado	Under secretariat for Fishery	No data provided
BirdLife International	Stuart Butchart	BirdLife International	N/A
SCAR	Eric Woehler John Cooper*	SCAR Group of Experts on Birds	No data provided

**Attachment 2 – Conservation Assessment Proposal**

## **Development of ACAP Species Conservation Assessments**

### **A proposal to develop comprehensive and contemporary species profiles of albatross and petrel species listed in Annex 1 of the Agreement**

The Status and Trends Working Group has progressed in working with data holders to compile time series information on the population status and trends of ACAP-listed species. Most of the existing information has been contributed to the group, to the point that analyses of population trends and assessment of required conservation actions are warranted. Similarly, the Breeding Sites Working Group has made substantial progress in achieving their aims. To progress adequately this important focus, the Status and Trends Working Group recommends the development of ACAP Species Conservation Assessments. This series of assessments will summarise all information relevant to the conservation status of each ACAP species. The information to be compiled will include data on size and trends of all populations for which information is available. The analyses of trends shall be consistent and comparable through the application of consistent decision rules and analytical techniques. Other information in the assessments shall include relevant demographic parameters (e.g. adult survival and recruitment), breeding and foraging distribution, and links to relevant national and international conservation initiatives. Importantly, the assessments shall also include the most up-to-date information on the taxonomic status, and threats impacting on each species. This harmonisation of information will enhance the synergy between the three current AC Working Groups (Status and Trends, Breeding Sites, and Taxonomy).

A critical element of this initiative is to export the products of the current working groups, currently largely housed within the institutions of the Chairs of the Working Groups, to the ACAP Secretariat. This “ACAP Branding” is deemed imperative at this stage to ensure the appropriate management and application of the information and analyses, and to showcase the work of ACAP to date. The initiative will provide a means to access, analyse and deliver the most up-to-date and comprehensive information on the conservation status of ACAP species. This information is not only critical for advancing the work of the Agreement, but will also prove invaluable to other international and national fora. The initiative will also be instrumental in encouraging other groups who have yet to engage with data delivery, or indeed ACAP, to participate in the work of the Agreement.

For this initiative to succeed, ACAP resources will be required. To date, the Working Groups have operated largely independently of ACAP resources. However, to collate and synthesise the information, to conduct trend analyses and to highlight and communicate the results, funding will be required to support the development of the conservation assessments and the production of results. It is anticipated that the ACAP Species Conservation Assessments will be produced in high-quality print copies (consideration to be given to appropriate languages), on CD and also on a web-based system via the ACAP website. The web-based system should be designed so that the information can be updated at least annually to provide the most comprehensive and current information available for all the ACAP-listed species.

An indicative work program and budget estimates are provided below:



	<b>PHASE I (December 2006 – May 2007)</b>	
1	Information compilation and drafting of Species Assessments:	
2	Development of population trends relational database:	
3	Statistical analyses of population trends:	
4	Drafting of synthesis of conservation assessments from species groups and regional perspectives to enable prioritisation of identified actions :	
	<b>INDICATIVE COST</b>	AUD\$ 29 000
	<b>PHASE II (July 2007 – November 2007)</b>	
6	Review of the Species Assessments and the priorities by Advisory Committee and Meeting of Parties	
7	Finalisation of the assessments and priorities	
8	Production of the ACAP Species Conservation Assessments in :	
	I. High-quality print reports (colour)	
	II. CD	
	III. Web-based via the ACAP Website	
	<b>INDICATIVE COST</b>	AUD \$20 000
	<b>Indicative total costs for PHASE I and II</b>	AUD \$ 49 000
	<b>PHASE III - Ongoing</b>	
	Maintenance of data quality assurance, review and input	AUD \$ 5 000 annually

# ACAP Species Conservation Assessments



## 1. Species Overview

### *SUMMARY OF STATUS, TRENDS AND THREATS*

## 2. Taxonomy

Order

Family

Genus and Species

Scientific Synonyms

Common names (English, French and Spanish)

### 1.1. 3. Listing Details

Date of listing on Appendix 1

IUCN Listing Category (Listing Year)

### 1.2. 4. Distribution and Range

## 4.1 BREEDING

Range States with Breeding Populations

Map showing breeding locations

Table of population jurisdiction, size, trend

Jurisdiction	Location	Pairs (year)	Estimate reliability	Population Trend
Country	A	Xxxxx	High	Decreasing
	B	Yy	Low	Unknown

	C	Zzzzz	Low	Unknown

## 4.2 Foraging Distribution

Range States that overlap with Foraging Distributions

Description based on published information and (possibly) maps from Tracking Ocean Wanderers

## 5. Population Status and Trends

### 5.1 Breeding Frequency and Season

Brief description of breeding frequency and months of presence at colonies, egg laying, hatching and fledging.

### 5.2 Population Size and Trends

Information on population size, reliability of the estimates and the statistical analyses of the trends.

Graph of trends over time with associated statistical parameters.

### 5.3 Population Demographic Parameters

Summary information on productivity, adult survival and recruitment including the years in which these data were collected

Location	Productivity	Adult survival	Juvenile survival

## 6. Threats

### 6.1 Marine Threats

Summary information of known interactions with fishing operations, e.g. known to interact with longline and trawl fisheries in waters adjacent to breeding colonies (reference). Also recorded as interacting with longline vessels in distant waters outside the breeding season (reference). Foraging range of adults overlaps with RFMO X and Y during the breeding season. The foraging range of juveniles remains unknown.

### 6.2 Breeding Site Threats

Information on threats that impact at breeding Sites

Site	Human Disturbance	Human take	Natural disaster	Disease	AIS	Habitat alteration	Human habitat alteration	AIS Predator	Changes in native species	Contaminants
a	low								high	
b	high						low			
c	medium					high				

## 7. National and International conservation initiatives

Provide links to conservation initiatives that are relevant to this species ie National action plans and recovery plans.

8. Priorities to improve conservation status

Assessment of the key gaps in knowledge for population information profile  
(taxonomy, population size, trend, demographic parameters, threats, distribution)

9. Information Sources

This section would likely be aggregated to cover all species assessments to minimise duplication.

**9.1 References**

**9.2 Contributors**

Information compiled by John Smith, reviewed by Status and Trends Working Group.

**Attachment 3 – Revised Work Plan**

Action	To be completed by	Responsibility
2.1 Establish Working Group: identify Working Group Chair and membership	End February 2005	Interim Secretariat / AC
2.2 Develop terms of reference	End February 2005	WG Chair / AC
2.3 (i) Circulate draft proforma and database format (for data on breeding albatrosses and petrels) to Working Group (WG) Members (ii) Provide comments on draft data proforma	End February 2005  End March 2005	WG Chair  WG Members
2.4 Notify Interim Secretariat of national coordinators to compile and submit data. Review coordinators as required	End March 2005 and ongoing	Parties and Signatories (Breeding Range States)
2.5 (i) Circulate final data proforma to Breeding Range States	Beginning April 2005	WG Chair
(ii) Provide data in completed proforma	End May 2005	National Co-ordinators for Breeding Range States (Parties and Signatories)
2.6 Initial Population of database	Mid June 2005	WG Chair
2.7 (i) Conduct initial gap analysis (ii) Compile progress report for AC1	End June 2005	WG Chair and Members
2.8 Continued population data collection	2006/2007 and ongoing	Breeding Range States (Parties and Signatories)
2.9 Determine frequency for data submission	June 2006	WG and AC2
2.10 Progress further development of electronic database	Jan-June 2007	WG, Chair (pending outcome of AC2)
2.10 Establish agreed process for analyses of trends	Jan-Feb 2007	WG, Chair (pending outcome of AC2)
2.11 Develop proforma for ACAP species assessments.	Jan-March 2007	WG, Chair (pending outcome of AC2)
2.12 Coordinate synthesis based on species conservation assessments	July 2007	WG, Chair (pending outcome of AC2)
2.13 Develop strategy of publication of species assessments in public domain – web, print, electronic.	July-Nov 2007	WG, Chair (pending outcome of AC2)
2.14 Consider amalgamation of Status and Trends WG with Breeding Sites WG	AC3	WG and AC