

Agreement on the Conservation of Albatrosses and Petrels

# **Third Meeting of the Parties**

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# Report on the Implementation of the Agreement on the Conservation of Albatrosses and Petrels 2006-2009

**Author: Advisory Committee** 

# REPORT ON THE IMPLEMENTATION OF THE AGREEMENT ON THE CONSERVATION OF ALBATROSSES AND PETRELS

#### 2006-2009

This report has been compiled by the Advisory Committee and the Secretariat pursuant to Article X (j) and in fulfilment of Articles VII (1c), IX (6d) of the Agreement and Article VIII (10). It is provided to the Meeting of the Parties to assist it in meeting its obligations under Article VIII (12) a) b) & c) to: consider reports from its subsidiary bodies; consider actual and potential changes in the conservation status of albatrosses and petrels, and the habitats important to their survival; and to review any difficulties encountered in the implementation of the Agreement.

The framework of **Section 1** of this report follows that of the Action Plan within Annex 2 of the Agreement and has been prepared on the basis of information provided by Parties, Range States and BirdLife International. **Section 2** provides a review of changes in the status and trends of the albatrosses and petrels listed under Annex 1 of the Agreement. **Section 3** identifies difficulties encountered in the implementation of the Agreement and makes recommendations on actions that can be taken to address them.

#### **Executive Summary**

#### SECTION 1

Eleven Parties (Argentina, Australia, Brazil, Chile, France, New Zealand, Norway, Peru, South Africa, the United Kingdom and Uruguay) and one Range State (the United States) submitted progress reports that were used in compiling this document. Information was also provided by BirdLife International detailing its significant achievements in seabird conservation activities. This information shows that a substantial amount of work is being done to implement the Agreement

In an attempt to gauge the progress of Parties in implementing the Agreement, a brief assessment of Parties' reported actions in response to four major threats to seabirds was conducted. In most cases, the Parties that submitted information to the Secretariat are addressing these four threats to some extent. Of these eleven, all reported taking actions to address fisheries bycatch, ten reported efforts to minimise IUU fishing, four reported actions addressing non-native species, and ten reported on efforts to address threats from pollution and marine debris.

Although a great deal is being accomplished by the Parties, Range States and BirdLife International, it is not possible to assess if the actions taken have been successful in achieving the objectives of the Agreement (Article II.1) and whether the conservation status of albatross and petrels has been improved (or maintained). Such an assessment will require further progress in the development of performance indicators for the Agreement, work to fill data gaps on some species and populations and improvements to national reporting.

Regarding interactions with and achievements in RFMOs, the most relevant were: (1) the adoption of seabird bycatch mitigation measures in several RFMOs, (2) the signature of an 'arrangement' between the WCPFC and the ACAP Secretariat, and (3) the interest expressed by other RFMOs in entering into similar arrangements with ACAP.

#### SECTION 2

There are currently 26 species listed by ACAP, 19 of which are classified at risk of extinction. Four albatross species are listed as *Critically Endangered*, five are *Endangered*, six are *Vulnerable* and four are *Near Threatened*. For the seven petrel species, four are currently listed as *Vulnerable* and three as *Near Threatened*.

Population declines, largely driven by interactions with fisheries, are responsible for triggering the unfavourable classification status for eleven species. A total of ten species are currently showing population declines. Restricted range of breeding locations is also a limiting factor for 16 ACAP species.

The analysis of land-based threats to ACAP species clearly indicated that introduced mammals are having the most widespread and deleterious effects at breeding sites, either because of depredation of adults or chicks, or destruction of habitat. The isolated islands on which ACAP species breed are well suited for pest eradication, and the number and scope of restoration programmes continues to increase. A paper submitted to AC4 (AC4 Doc52) provided recommendations, useful further reading, and a list of online resources to conservation managers when considering, designing and executing pest eradication programmes.

Since MoP2 (2006) there have been changes in the status of seven ACAP species as a result of reviews by BirdLife International, the listing authority for the International Union for the Conservation of Nature (IUCN). Specifically, the White-capped albatross and Shy albatross as separate species were listed as *Near threatened*, Southern giant petrel was down listed to *Near Threatened*, Waved albatross was up listed to *Critically Endangered*, Spectacled petrel was down listed to *Vulnerable*, Tristan albatross was up listed to *Critically Endangered*, and Buller's albatross was down listed to *Near Threatened*.

#### SECTION 3

In terms of experience gained since MoP2 and difficulties found in implementing the Agreement, the low level of information on seabird bycatch in both domestic and high seas fisheries is a serious impediment to tackling the most important (at sea) threat for ACAP species. Information on the distribution of fishing effort, and levels of seabird attendance and bycatch is required from both Parties and RFMOs as a high priority. This will require the development of bycatch observer programmes in many fisheries.

In a broader sense, the development of a framework to identify ACAP priorities for conservation action will be critical to guide actions to fulfil the objectives of the Agreement. The development of a prioritisation framework was discussed in AC4 and further work has been undertaken intersessionally under the leadership of New Zealand (see MoP3 Doc 20).

Other processes under development and essential for the implementation of the Agreement are (a) the strategy for engagement with RFMOs, (b) a process for the allocation of funds to the Advisory Committee Work Programme and (c) the development of a medium-long term strategy on capacity building. It was noted during AC4 that substantial financial and human resources will be required from the Secretariat to achieve an increasingly complex work programme. In this regard, the AC supported the creation of an additional science support position in the Secretariat, emphasising that without this post it would be impossible for the Advisory Committee to achieve the work necessary to ensure the implementation of the Agreement (AC Report, section 15.2).

It is critical that the Secretariat has sufficient resources to support the important initiatives that have been identified by the Working Groups and the Advisory Committee in the Advisory Committee Work Programme. Underpinning these initiatives is the ability to further develop the online ACAP web portal and database. These tools provide the means to efficiently maintain current, accurate and comprehensive information on ACAP populations' trends and threats, both at sea and on land. The ability to access, update and curate this information will be essential for the prioritisation process noted above. The most important outputs from the Advisory Committee Work Programme

over the next triennium, with regard to implementation of the Agreement are (a) the completion and implementation of the prioritisation process, (b) the collation of data from many sources, including from national reports of Parties, on distribution of fishing effort and mortality of albatrosses/petrels attending fisheries and its incorporation into the ACAP database, (c) the development of a strategy for engagement with RFMOs, (d) significant progress achieved in regards to the adoption of and compliance with bycatch mitigation measures by Parties and RFMOs, (e) implementation of the Waved albatross plan of action (and consideration of/development of other plans of action, (f) a medium-long term strategy for capacity building developed and implemented, (g) the revision and update of species assessments, (h) consideration of amendments to Annex 1, and (i) the revision and update of best-practice guidelines.

To address the difficulties identified in implementing the Agreement the Advisory Committee recommends that the Meeting of Parties:

- (a) Approves the allocation of funds for an additional science support position in the Secretariat (AC4 Report paragraph 15.2.1);
- (b) Approves a budget sufficient to allow for the effective operation of the Advisory Committee (AC4 Report Annexes 8 and 15 and MoP3 Doc 24);
- (c) Requests Parties and Range States to improve bycatch reporting through the process being developed by the SBWG. Improvements include provision of relevant data on seabird bycatch to the Secretariat, support for the collection and provision of such data by RFMOs and where necessary, establishment of bycatch observer programmes to collect this data (AC4 Report, paragraph 13.17);
- (d) Requests Parties, on the basis of the information provided by the SBWG, to review the efficacy of seabird bycatch mitigation measures used in the fisheries that they manage either directly (i.e. within their EEZ) or indirectly (e.g. via their membership of RFMOs);
- (e) Requests Parties to provide the necessary resources for the priority research activities identified by the Advisory Committee's Working Groups (see Annex 2); and
- (f) Requests the Advisory Committee to develop a revised national reporting process to improve i) the provision of data by Parties and ii) the ability to measure progress in implementing the Agreement (AC Report, section 7.1.6).

# 1. Overview of Implementation of the Agreement

Parties, Range States and others were requested to submit a report to the Secretariat using the format revised at AC3 (see AC3 report, Annex 8). Information provided was collated by the Secretariat and presented in tabular format for ease of assessing completeness of reports and progress in achieving the objectives of the Agreement.

At the Fourth Meeting of the ACAP Advisory Committee (AC4), reports were received from eight Parties (Argentina (AC4 Doc 42), Australia (AC4 Doc 43), Chile (AC4 Doc 32), France (AC4 Doc 34), New Zealand (AC4 Doc 48), Peru (AC4 Doc 37), South Africa (AC4 Doc 51), the United Kingdom (AC4 Doc 53), three Range States (Brazil (AC4 Doc 44), the United States (AC4 Doc 54), Uruguay (AC4 Doc 43)) and from BirdLife International (AC4 Doc 55). Norway submitted its report subsequent to the meeting. Most of the reports received followed the reporting format prescribed in Annex 8 of the record of AC3 and covered the period June 2006 to March 2008, as well as including earlier information where relevant. Not all respondents reported against every reporting item.

The reports indicate a substantial amount of work being done to implement the Agreement. The extensive information contained in these documents was compiled and summarised by the Secretariat (AC4 Doc 16) with specific reference to the text of the Agreement, its Action Plan and the Advisory Committee Work Programme. The reporting by Parties, Range States and BirdLife International for the period 2006-2008 against items for which information was requested by the ACAP Secretariat is shown in Table 1.

A brief assessment of reported actions in response to the major threats to seabirds was conducted by the Secretariat and is provided in Table 2 as a way of assessing progress in implementing the Agreement. In most cases, all of those that submitted information to the Secretariat are addressing these threats to some extent, but it is not possible to describe all progress as not all Parties have provided information on their activities.

It is essential that this gap in information be filled so that a full and accurate evaluation of the Parties' progress in implementation can be conducted. At AC4, Parties, Range States and other Organisations were requested: (1) to check that the summary tables accurately reflected the content of their reports (and fill the gaps of information in those Parties that didn't submit information in due time), and (2) to provide a short summary (150 - 200 words) of activities over the reporting period for inclusion in the present document. Summaries received are included in Annex 1.

On the basis of the submitted reports it is not possible to assess if the actions taken have been successful in achieving the principal objective of the Agreement of improving the conservation status of albatrosses and petrels (Article II.1). Such an assessment will require further progress on a range of work, including the development of performance indicators for the Agreement, work to fill data gaps on some species and populations and on bycatch, and further improvements in Parties' national reports.

Although information is not currently sought from Parties on action that has been taken in Regional Fisheries Management Organisations (RFMO), important results were achieved thanks to the work conducted by the Secretariat, AC Officials, Parties, Range States, BirdLife International and other non-government organisations. These achievements include the adoption of seabird bycatch mitigation measures in a number of RFMOs, the signature of an 'arrangement' between the WCPFC and the ACAP Secretariat, and the interest expressed by other RFMOs in entering into similar arrangements or MoU. Much work remains to be done however, particularly with regard to the development of bycatch observer programmes in RFMOs, the collection and submission to ACAP of data on seabird bycatch, and the development and implementation of more effective bycatch mitigation measures.

# 2. Review on the status and trends and habitat of albatrosses and petrels

# 2.1. Current Conservation Status

There are currently 26 seabird species listed by ACAP in Annex 1 of the Agreement. Of these, 19 (73%) are classified at risk of extinction, a stark contrast to the overall rate of 12% for the 9,799 bird species worldwide. Of the 19 species of albatrosses listed by ACAP, four are listed as *Critically Endangered*, five are *Endangered*, six are *Vulnerable* and four are *Near Threatened*. For the seven petrel species, four are currently listed as *Vulnerable* and three as *Near Threatened* (Table 3). No ACAP species currently warrants the lower category listing of *Least Concern* (see AC4 Doc 11).

Population declines (historic and/or current), largely driven by interactions with fisheries, are responsible for triggering the unfavourable classification status for eleven species. A total of ten species (38% of ACAP species) are currently showing population declines, with historic population declines responsible for the acutely small population of one species (Amsterdam albatross). Restricted range of breeding locations is also a limiting factor for 16 ACAP species. A series of species assessments is being developed to describe succinctly the state of knowledge of each of the ACAP species. Those assessments that are already available on the ACAP website are referenced below. A synopsis of the status of the world's albatross species has also recently been published (Gales, R. 2008 Albatross: Flagship Taxa at Half Mast; in T de Roy, M Jones & J Fritter (eds.), Albatross: their World, their Ways, A&C Black, London).

The analysis of land-based threats to ACAP species (AC4 Doc 13) clearly indicated that introduced mammals are having the most widespread and deleterious effects at breeding sites, either because of depredation of adults or chicks, or destruction of habitat. Those threats affecting the most breeding sites were depredation by domestic cats *Felis catus* and ship rats *Rattus rattus*, and

habitat destruction by reindeer *Rangifer tarandus*, which affected 26, 16 and eight breeding sites, respectively. The two ACAP species with the most threats listed are the burrow-nesting Grey petrel *Procellaria cinerea* and White-chinned petrel *P. aequinoctialis*, mainly from the widespread effects of introduced mammals. All other threats affected four or fewer breeding sites. In most cases where the threat is depredation by alien species or habitat destruction by alien species, eradication is already under consideration. Given that the isolated islands on which ACAP species breed are well suited for eradication, and the number and scope of restoration programmes continues to increase, the BSWG Convenor prepared guidelines for the eradication of alien mammals from breeding sites, providing recommendations, useful further reading, and a list of online resources for conservation managers when considering, designing and executing eradication programmes (AC4 Doc 52). This is the first of a suite of conservation guidelines that will be developed for ACAP breeding sites.

Table 1. Reporting by Parties, Ranges States and others for the period 2006—2008 against items for which information was requested by the ACAP Secretariat. Gaps in the table indicate that reporting was not received, and do not necessarily mean that a Party, Range State of other body did not carry out action against a particular item.

ACAP Contracting Parties, Range States & Others	Status	Species Conservation					Habitat Human Activities					ies		ese	Educ ation							
		Outline of planned activities	Management of non-native species	Exemptions on take	Use and Trade	Species conservation plans	Emergency Measures	Re-establishment schemes	Other conservation projects	Measures to protect breeding site	Manage food resources	Important marine area management	Environmental Impact Statements	Bycatch management	กกเ	Marine Pollution	Minimise disturbance	Ongoing Research Programmes	Fisheries bycatch observers	Information/Training (user audiences)	Information/Training ( general public)	Implementation Summary
Argentina	Р	•	•	•	•		•	•	•	•	•	•	•	•	•	•		•	•	•	•	•
Australia	Р	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Brazil	Р			•	•	•			•	0			•	•	•	•	0	•	•	•	•	•
Chile	Р	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ecuador	Р																					
France	Р	•		•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	
New Zealand	Р	•	•	0	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Norway	Р	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Peru	Р	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
South Africa	Р	•	•							•	•			•	•	•	•	•	•	•	•	•
Spain	Р																					
United Kingdom	Р	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Uruguay	Р					•			•					•								
USA	RS		0			0		0	0				0	•	•			•	0	•	•	
BirdLife	Other	•	•			•				•	•	•		•				•	•	•	•	•

P= Party, RS = Range State

- Activity has been reported upon
- O Activity has been reported upon, but does not relate to ACAP species

Table 2. Assessment of the actions undertaken by ACAP Parties, Range States and BirdLife International in relation to key conservation issues for Albatrosses and Petrels.

	Argentina	Australia	Brazil	Chile	Ecuador	France	New Zealand	Norway	Peru	South Africa	Spain	United Kingdom	Uruguay	USA	BirdLife
Species Conservation							Ī								
Recovery/Action plans in place															
<ul> <li>for some breeding ACAP species/populations</li> </ul>		•	N/A			•			•			•	N/A	N/A	•
<ul> <li>for all breeding ACAP species/populations</li> </ul>			N/A				•						N/A	N/A	,
Management of non-native species															
<ul> <li>action underway for populations under threat</li> </ul>		•	N/A			•	•		N/A			•	N/A	N/A	•
<ul> <li>quarantine procedures planned for breeding sites</li> </ul>			N/A						N/A			•	N/A	N/A	
<ul> <li>quarantine procedures in place for breeding sites</li> </ul>		•	N/A				•		N/A	•			N/A	N/A	
Use and trade of Annex 1 Species?	No	No	No	No	No		No		•			No			
Measures underway to eliminate illegal, unregulated and unreported (IUU) fishing	•	•	•	•		•	•	•				●(1)		•	
Habitat Conservation															
Legal & policy instruments completed to protect breeding sites	•	•	•	N/A		•	•	•	N/A	•		•		N/A	•
Sustainable management of marine resources allows for seabird prey species		•	•					•	•			• (2)			•
Marine Protected Areas relevant to Annex 1 Species:															
<ul> <li>under consideration</li> </ul>			•				•	•	•			•			•
- established	•	•		•		•									•
Tourist visitation to breeding sites managed/not permitted		•	•	N/A			•	•	N/A			•	N/A	N/A	
Fisheries Bycatch															
National Plan of Action (NPOA) in place															
<ul> <li>in place, longline method only</li> </ul>				•								• (3)	•	•	•
<ul> <li>in place, includes trawling</li> </ul>							•					• (3)			•
- under development	•	•						•	•	•					•
National fishery observer programmes															
- Under development				•				•	•						
<ul> <li>in place, target species only</li> </ul>		•	•				•								
<ul> <li>in place, bycatch species included</li> </ul>	•	•	•			•	•					•		•	•
<ul> <li>dead seabirds (killed as bycatch) collected for provenance &amp; other studies</li> </ul>	•	•					•			•					

			_										7 19 0111	a	140. <u>3.</u> 0
	Argentina	Australia	Brazil	Chile	Ecuador	France	New Zealand	Norway	Peru	South Africa	Spain	United Kingdom	Uruguay	USA	BirdLife
Bycatch levels:															
- quantified, declining		•				•						•			
- quantified, increasing															
<ul> <li>quantified, no change over last 5 years</li> </ul>	•														
Mitigation measures															
- being trialled	•	•	•			•						•		•	•
- in use and mandatory	•	•		•		•	•			•		•	•		
Research Programmes															
Population monitoring programmes															
<ul> <li>for some breeding ACAP species/populations</li> </ul>	•	•	N/A	•	•		•	N/A	N/A	•		•	N/A	N/A	•
<ul> <li>for all breeding ACAP species/populations</li> </ul>			N/A						N/A				N/A	N/A	
Tracking studies															
- planned	•					•	•			•		•			•
- underway	•		•			•	•			•		•			•
Bycatch mitigation research															
<ul> <li>pelagic longline methods</li> </ul>		•	•				•			•		•			•
<ul> <li>demersal longline methods</li> </ul>	•	•	•			•				?		•			
- trawl methods	•						•			•					•
Education and Public Awareness															
Dissemination of information / training for scientists, fishermen, conservation bodies & decision-makers	•	•	•	•		•	•	•	•	•		•			•
Dissemination of information / training for general public	•	•		•		•						•		•	•

<sup>•</sup> Activity has been reported upon; N/A = Not applicable; No = no exemptions granted.

(1) Considered in one fishery operating in the South Atlantic; (2) Effective measures to combat IUU in place, with exception of Tristan da Cunha; (3) Working with Parties and Range States to plan and implement conservation action

The four ACAP species that are ranked as *Critically Endangered* face an "extremely high risk of extinction in the wild". For the **Chatham albatross**<sup>1</sup> this level of risk results from their extremely restricted breeding distribution, an area of less than 10 ha on The Pyramid, a rock stack off New Zealand's Chatham Islands. The condition of their breeding habitat has also deteriorated as a result of extreme storm events and possibly the influence of climate change. The **Amsterdam albatross**<sup>2</sup> is *Critically Endangered* due to a population of fewer than 100 mature individuals, and breeding being confined to a single island. Despite recent increases in number of breeding adults, the population is projected to decline due to the likely impacts of disease that has caused elevated chick mortality. The **Waved albatross**<sup>3</sup> was recently categorised as *Critically Endangered* following confirmation of population declines resulting from both fisheries bycatch and harvesting for human consumption. The **Tristan albatross**<sup>4</sup> has also been ranked as *Critically Endangered*. Nearly the entire world population of this species breeds on Gough Island in the South Atlantic. Its population is projected to decline significantly owing to bycatch of adults in fisheries and reduced productivity resulting from chicks being killed by introduced mice.

Five ACAP albatross species qualify as *Endangered*, and so face a "very high risk of extinction in the wild", with the current overall population trends for all five species documented as declining. The **Northern royal albatross** has an extremely restricted breeding range, with breeding success of the Chatham Island population (99% of all breeding pairs) being reduced due to lack of nest material as a result of storm-induced habitat changes. Globally significant populations of **Black-browed albatross** have shown rapid population declines largely as a result of interactions with trawl and longline fishing operations throughout their breeding and migration ranges. The breeding range of the **Atlantic yellow-nosed albatross** is extremely restricted and population declines in this species are also largely influenced by widespread deaths associated with fishing activities. Widespread fisheries mortalities also impact on **Indian yellow-nosed albatross**, with population declines at the main Amsterdam Island breeding site exacerbated by the impact of disease (including avian cholera) that has reduced breeding success. **Sooty albatross** at Gough Island and the Tristan da Cunha group are declining and this species may require listing as *Critically Endangered* if these trends are found to be more widespread.

For the ten ACAP species listed as *Vulnerable*, it is their restricted number of breeding locations that is the criterion that most frequently qualifies the species for listing. Reflecting this localised breeding is the high degree of endemism of these birds, with seven of these species being breeding endemics, most of them to New Zealand. Recently acquired data for the **Antipodean albatross** show declines in breeding success, recruitment and adult survival which, if continued, could result in reclassification as *Endangered* or *Critically Endangered*.

The global population status of **Southern royal albatross** is currently assumed to be stable. The status of the **Salvin's albatross** population is also assumed to be stable, although lack of comparable population data makes the accuracy of this assessment uncertain. **Campbell albatross** is restricted to breeding at a single location and are reported as increasing in numbers, although lack of recent population monitoring makes this assessment uncertain.

Population declines and reduced survival rates of **Wandering albatross**, likely as result of incidental mortality associated with fisheries, are the trigger for listing this widely dispersed species (with breeding locations in the Indian, Atlantic and Pacific oceans). **Grey-headed albatross** is also impacted by fisheries and if the population declines being documented at some sites continue and/or are reported for other sites for which there is no current information, the species could qualify for being up listed to *Endangered*.

The status of **White-chinned petrel** populations is not well understood as there is no good time series of comparable population estimates. The available evidence, however, indicates significant

www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_chatham\_albatross\_en.pdf
 www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_amsterdam\_albatross\_en.pdf

www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_waved\_albatross\_e.pdf

<sup>4</sup> www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_tristan\_albatross\_e.pdf

declines, consistent with high rates of fisheries related bycatch and vulnerability to predation. **Spectacled petrel** is endemic to Inaccessible Island in the Tristan da Cunha group and is also accidentally caught in fishing operations. The population has recovered in recent years following the eradication of pigs from the island, and its IUCN status was reclassified in 2007 to reflect the reduced risk of extinction. Both the **Black petrel**<sup>5</sup> and **Westland petrel** are New Zealand endemics with very restricted breeding ranges resulting in both species being highly vulnerable to predators and other land based threats. Both species are also killed during fishing operations.

Seven ACAP species currently have a lesser risk of extinction and are considered *Near Threatened*. Recently, **Buller's albatross**<sup>6</sup> has been moved to this category because the population is stable or increasing, and although restricted to few breeding islands, is moderately widespread, reducing the impacts of potential stochastic events.

Similarly, **Light-mantled albatross** is currently considered as *Near Threatened*, and whilst the species is known to be killed by fishing interactions the population trends of the largest populations at South Georgia (Islas Georgias del Sur), Kerguelen and the Auckland Islands remain largely unknown. **White-capped albatross** is known to be exposed to fisheries that kill many thousands of albatrosses each year and information on population trends, survival rates and breeding frequency for this species has yet to be fully understood. Similar difficulties in accessing the largest of the three **Shy albatross**<sup>7</sup> populations confound an accurate assessment of the overall population trend, although it is documented that this species is impacted by both fisheries bycatch and disease.

Both giant petrel species are currently ranked as *Near Threatened*. The global population of **Northern giant petrels** has increased in recent years, possibly as a result of increased food availability from carrion and fisheries discards. Similarly, **Southern giant petrel** population declines during the twentieth century appear to have stabilized and some of the major colonies have shown increases. However, information on important demographic rates for these species are either extremely limited (adult survival) or lacking completely (juvenile survival).

More urgently, reliable population size and trend data are required for **Grey petrel** as these are currently lacking. Comparisons of historic estimates suggest that this species has decreased significantly at several breeding sites and may require up listing into a higher threat category. Grey petrels are known to be killed in numerous longline fisheries and to also be negatively impacted by direct predation and habitat loss as a result of feral pests.

# 2.2. Changes in Status and Trends since MoP2

Since MoP2 (2006), there have been changes in the status of seven ACAP species as a result of reviews by BirdLife International, the listing authority for the International Union for the Conservation of Nature (IUCN). These are:

- Following recognition by ACAP of the White-capped albatross and Shy albatross as separate species, these two species were reviewed by BirdLife and assigned as Near threatened because of restricted breeding sites, and documented mortality in longline and trawl fisheries.
- **Southern giant petrel** was reassessed from *Vulnerable* to *Near Threatened*, noting that despite the impacts of fisheries bycatch, some major colonies are increasing.
- **Waved albatross** was reassessed from *Vulnerable* to *Critically Endangered* because the species has an extremely small breeding range, essentially confined to one island, and evidence suggests that it has experienced a substantial recent population decline.
- **Spectacled petrel** was reassessed from *Critically Endangered* to *Vulnerable* because of apparent population increases. However, significant numbers are caught as bycatch in

<sup>5</sup> www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_black\_petrel\_e.pdf

<sup>&</sup>lt;sup>6</sup> www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_bullers\_albatross\_en.pdf

www.acap.aq/en/images/Species\_Assessments/acap\_species\_assessment\_shy\_albatross\_e.pdf

- longline fisheries and owing to its very small breeding range, it is highly susceptible to stochastic events and human activities, resulting in it being assessed as vulnerable.
- Tristan albatross was reassessed from Endangered to Critically Endangered as a result of
  restricted breeding range and population declines caused by low adult survival owing to
  incidental mortality in longline fisheries, and compounded by low fledging success caused by
  predation of chicks by introduced mice.
- **Buller's albatross** was reassessed from *Vulnerable* to *Near Threatened* because, although it is restricted to a small area when breeding, the population is stable and the islands on which it breeds are spread geographically, so that it is unlikely to become highly threatened in a short time owing to human activities or stochastic events.

Table 3. Summary of Status of ACAP Albatross and Petrel species – 2008

	Population decline	Restricted breeding range	Limited population size	Decline in habitat	Endemic to single country	Country endemic	No. subpopulations	Annual breeding pairs	Breeding frequency	Current population trend
CRITICALLY ENDANGERED										
Chatham albatross		•		•	•	New Zealand	1	4 575	Α	stable
Amsterdam albatross	•	•	•		•	France	1	26	В	increasing
Waved albatross	•	•		•	•	Ecuador	2	< 9 600	Α	declining
Tristan albatross	•	•			•	United Kingdom	1	1 763	В	declining
ENDANGERED										
Northern royal albatross	•	•		•	•	New Zealand	3	6 500 - 7 000	В	declining
Black-browed albatross	•						7	530 000	Α	declining
Atlantic yellow-nosed albatross	•	•			•	United Kingdom	1	27 000 - 41 100	Α	declining
Indian yellow-nosed albatross	•						4	40 583	Α	declining
Sooty albatross	•						5	12 500-19 000	Α	declining
VULNERABLE										
Wandering albatross	•						5	8 050	В	declining
Antipodean albatross	?	•			•	New Zealand	3	11 000	В	unknown
Southern royal albatross		•			•	New Zealand	2	8 400	В	stable
Salvin's albatross		•			•	New Zealand	2	30 750	Α	stable
Campbell albatross		•			•	New Zealand	1	23 500	Α	increasing?
Grey-headed albatross	•						7	92 300	В	declining
White-chinned petrel	•						9	200 000 – 330 000	Α	declining
Spectacled petrel		•			•	United Kingdom	1	10 000	Α	increasing
Black petrel		•			•	New Zealand	1	1 750	Α	stable?
Westland petrel		•			•	New Zealand	1	ca. 5 000	Α	stable?
NEAR-THREATENED										
Buller's albatross		•			•	New Zealand	3	31 940	Α	increasing?
White-capped albatross	?	•			•	New Zealand	2	110 000	?	unknown
Shy albatross	?	•			•	Australia	3	12 750	Α	stable?
Light-mantled albatross	?						6	19 000 - 24 000	В	unknown
Northern giant petrel							10	24 750	Α	increasing
Southern giant petrel							10+	43 500	Α	increasing
Grey petrel	?						9	?? 100 000's	Α	unknown

#### 3. Next steps for the Agreement

#### 3.1. Amendments to the Action Plan

No amendments have been proposed to the Action Plan (Annex 2 to the Agreement).

# 3.2. Difficulties with implementation of the Agreement

The Advisory Committee identified and has started to address a number of difficulties with the implementation of the Agreement:

- Identification of priorities for conservation action. ACAP needs an objective framework to identify priorities to make the best use of available resources for management actions to address threats to albatrosses and petrels and achieve the objectives of the Agreement. In response to two papers (AC4 Doc 48, AC4 Doc 15), AC4 commenced a process to develop this framework that will be critical in the near future, given the increasing demands and complexity of the Agreement's agenda. Further work has continued intersessionally, led by New Zealand and reported in document MoP3 Doc 20. The proposed framework should not only identify conservation priorities but also (1) draw attention to existing data gaps, (2) constitute a baseline against which the effectiveness and future progress of the Agreement could be assessed and (3) provide the basis for developing performance indicators to measure the success of the Agreement.
- Interaction plan for engagement with RFMOs. The Advisory Committee considers that fisheries bycatch continues to be the greatest single threat to improved conservation of ACAP listed species and, despite some progress in adopting mitigation measures, a high level of seabird bycatch continues in fisheries managed by Regional Fisheries Management Organizations (RFMOs). Thus, it is critical that ACAP continues to engage with RFMOs and encourage them to take further urgent mitigation and monitoring actions. A process was discussed during AC4 (AC4 Doc 56, AC4 Report para 13.26) to define an engagement strategy and to identify priority products for ACAP for use at RFMO meetings. These products include species assessments, documents on mitigation measures for different fishing gear and on guidance for observer requirements. The following components were recognised as being critical to the success of the engagement process: (1) having one designated Coordinator for each RFMO; (2) the importance, where possible, of having that Coordinator attending RFMO meetings under the ACAP flag, rather than forming part of national delegations; (3) the importance of maintaining a close dialogue between RFMO Coordinators, Parties, AC Officials and the Secretariat to develop an ACAP-approved approach (including generic or specifically tailored products) to relevant RFMO meetings; and (4) the need to improve internal domestic consultations in Parties common to ACAP and RFMOs in order to have RFMO representatives adequately briefed on relevant ACAP issues for these meetings.
- Collection of data on seabird bycatch. It is critical that ACAP holds or has easy access to reliable information on the distribution of fishing effort, levels of seabird attendance and bycatch for fisheries within the EEZs of Parties and Range States, as well as for the high seas. During AC4, the Advisory Committee initiated a process for the compilation of existing data among the Parties. This information will be critical to identifying and tackling the most important (at sea) threat for ACAP species and to thereby improving the conservation status of albatrosses and petrels. The first step to achieving this goal will be to examine data currently gathered by Parties and to develop and test a template for data compilation.
- <u>National reporting by Parties</u>. As mentioned earlier in this report, the current scope and format of national reports does not provide sufficient information to measure progress in implementing the Agreement. AC4 (AC4 Report paragraph 7.1.6, AC4 Doc 16) discussed other difficulties with these reports, including that the lack of a standard format made it difficult to consolidate individual reports into a whole-of-Agreement view and that reports

should include improved bycatch reporting, and in due course include performance indicators and take account of the prioritisation framework for the Agreement. The Advisory Committee agreed that further development of the format and content of national reports was required and intersessional work is being undertaken by Australia, Chile and the UK.

- Allocation of funds for the Advisory Committee Work Programme. Adequate funding is required for both the operation of the Advisory Committee and for its Work Programme to allow it to operate effectively. In the past triennium, the Work Programme has been funded by voluntary contributions from some Parties and the contributions of new Parties that have acceded to ACAP since MoP2 in December 2006. During AC4, the Advisory Committee allocated these funds to specific projects by following a funding application process (see AC4 Doc 53). While the result was satisfactory, with the allocation of AUD\$128,750 to six projects, the Advisory Committee agreed that the funding allocation process needed to be improved and agreed to work on this issue intersessionally (AC4 Report paragraph 15.3.1). The future AC Work Programme will be difficult to undertake without sufficient reliable funds.
- <u>Capacity Building</u>. Capacity building was recognised as a key issue during the last Meeting
  of Parties and was discussed at AC3 and AC4 (AC4 Report paragraphs 14.1.1–14.1.3). A
  medium-long term strategy on capacity building (MoP3 Doc 18) is being developed to drive
  actions in the most effective and productive manner for all Parties. The strategy is intended
  to establish not only ACAP goals but also to define methods for capacity building and to
  explore sources of funding and expertise.
- Increasing demands in the work programme. During AC4, the Advisory Committee noted that substantial financial and human resources will be required from the Secretariat to achieve an increasingly complex work programme. It also noted that three additional Parties have acceded to the Agreement with resultant increased workload for the Secretariat. The Advisory Committee strongly supported the creation of an additional science support position in the Secretariat for this purpose, emphasising that without this position it would be very difficult for the Advisory Committee to complete the work necessary to ensure the implementation of the Agreement (AC4 Report paragraph 15.2.1).

#### 3.3. Key outcomes for the next triennium

The Advisory Committee has not defined key outcomes that ACAP should have achieved by the end of the next triennium (2012). The following list has been assembled by the Chair and vice-Chair as a suggestion. If these outcomes are to be achieved, then all parts of the ACAP family will need to contribute: Parties (Range States and Others), Secretariat, Advisory Committee and the Working Groups, and interested non-government organisations.

- a) All relevant Parties and Range States have effective and operational seabird bycatch reduction plans;
- b) All relevant RFMOs have effective and operational seabird bycatch reduction plans;
- c) Eradication of introduced species has been undertaken at ten breeding sites and is underway at ten others;
- d) A system of indicators to assess the success of the Agreement is in use and is indicating positive trends;
- e) The process to identify priority conservation management actions is complete;
- f) ACAP Plan of Action for the Waved albatross fully implemented, and threats at breeding sites identified and controlled. Incidental mortality in fisheries reduced to negligible levels and intentional (directed) capture in fishing villages no longer a common practice;

These actions would need to be underpinned with a research and monitoring programme with the following targets:

- g) Processes established to collect relevant data on seabird bycatch from fisheries in both EEZs and RFMOs:
- h) Censuses and long-term demographic studies of ACAP species are occurring, particularly for those populations where recent data are unavailable;
- i) All current long term-population studies on ACAP species are continuing;
- j) Studies of foraging distribution of ACAP species are underway, especially for populations where comprehensive information is currently lacking (distribution of different age and sex classes, and during both breeding and non-breeding seasons)
- k) Further research on the impacts of introduced species at breeding sites of ACAP species has been initiated, particularly where their effect is unknown, and on the development of effective techniques for their eradication;
- I) Further research on the potential impacts of pathogens and parasites on ACAP species and, if practical, on the development of effective treatments has been initiated;
- m) Implementation of the extensive research programme developed by the SBWG for the development and refinement of bycatch mitigation measures for all relevant gear types;
- n) Implementation of the research programmes developed by the other Working Groups (see Annex 2);

This work would be underpinned also with a number of other capacity building initiatives and information sharing processes including:

- o) Interaction plan for ACAP to engage and assist RFMOs and other relevant international bodies developed and implemented;
- p) ACAP medium-long term strategy for capacity building developed and implemented;
- q) Assistance provided to Parties with the implementation of effective mitigation measures to reduce the levels of incidental mortality associated with fisheries;
- r) Information gaps on the status and trends of ACAP species completed and new species evaluated for inclusion in Annex 1. Species assessments should be periodically reviewed;
- s) Best-practice guidelines to mitigate threats to breeding sites developed, reviewed and updated;
- t) Development of 'Arrangements' with all relevant RFMOs to facilitate information sharing;
- u) Further Plans of Action for Critically Endangered species developed as necessary; and
- v) Further development of the online ACAP web portal and database. These tools are essential for maintaining current, accurate and comprehensive information on ACAP populations, trends and threats, both at sea and on land. The ability to request, update and curate this information efficiently will improve the prioritisation process already in place. The species assessments are proving to be a benchmark for compiling and communicating the comprehensive and up-to-date information required for the Agreement to undertake its work. It is vital that these are available in all languages of the Agreement.

#### 3.4. Recommendations

In consideration of the difficulties identified above in implementing the Agreement the Advisory Committee makes the following recommendations to the Meeting of the Parties:

- (a) Endorse the allocation of funds for an additional science support position in the Secretariat.
- (b) Approve a budget for the operation of the Advisory Committee to enable its effective operation;
- (c) Request Parties and Range States to provide relevant data on seabird bycatch to the Secretariat, and to support the collection and provision of this data by RFMOs that they are members of. Where necessary, establish bycatch observer programmes to collect this data;

- request Parties to establish effective domestic consultation processes to facilitate implementation of the Agreement;
- (d) Request Parties to review the efficacy of seabird bycatch mitigation measures used in the fisheries that they manage on the basis of the information provided by the SBWG;
- (e) Request Parties to provide the necessary resources for the conduct of the research programme identified by the Advisory Committee's Working Groups (see Annex 2).

ANNEX 1. Summarized implementation reports submitted by Parties and Range States following the request in AC4 Doc 16 endorsed by the Advisory Committee.

#### Australia

Australia completed the domestic actions to ratify the amendments to Annex 1, following the MoP2 decision to revise the taxonomy for albatrosses. Regular population counts and monitoring were undertaken for all Australian breeding populations of ACAP species, apart from those at Heard Island and in Antarctica. Seabird bycatch mitigation measures are mandatory in most Australian longline fisheries and have greatly reduced bycatch. The need for mitigation measures in trawl fisheries is currently being investigated. Population data on Southern giant petrels were submitted to the Scientific Committee on Antarctic Research for assessment of whether the species should be declared a Specially Protected Species under the Antarctic Treaty. The Australian and Tasmanian Governments jointly funded a AU\$24.6 million, seven-year programme to eradicate alien invasive species at Macquarie Island, a major Australian breeding site for four albatross and three petrel species listed under ACAP. A national exhibition, promoting greater awareness of the need for national and international action to conserve ACAP species, was held in the Australian Parliament House in Canberra; the assistance of several ACAP Parties which provided photographs is gratefully acknowledged. An educational brochure was also developed for the exhibition and has been helpful in several other forums.

#### Chile

En febrero de 2008 se oficializó el Plan de Acción Nacional de Aves Marinas (PAN-AM/Chile), que abarca todas la aves marinas que interactúan con las pesquerías chilenas y dispone de medidas de mitigación inmediatas. En Chile interactúan con las pesquerías 9 especies de albatros y 3 de petreles que es encuentran en el Anexo I de ACAP. Respecto a la captura incidental, durante el 2007 las mortalidades de aves han disminuido significativamente en las pesquerías de bacalao en el sur de Chile, principalmente por el uso de la "cachalotera". Se estima que en la pesca palangrera pelágica desarrollada en la zona norte habría una interacción significativas con estas aves, por lo que se realizará una evaluación durante el 2008-2009. En Chile, las amenazas antrópicos se estiman que son bajas, ya que casi la totalidad de las colonias están dentro de parques nacionales, su captura está prohibida y no es objeto de comercialización. En cuanto a las especies invasoras, se encuentra en desarrollo un plan de largo plazo para su erradicación. A la fecha la difusión de ACAP se ha realizado solamente a nivel agencias gubernamentales.

#### **New Zealand**

During the next triennium, New Zealand will execute a number of actions relating to ACAP and its Action Plan. Actions include continuing: (1) at-sea observer coverage to investigate the nature and extent of seabird bycatch; (2) implementation and development of mitigation practices; (3) investigations of population demography and at-sea distribution of albatrosses and petrels including several on Annex 1 of the Agreement; (4) finalising the review of New Zealand's National Plan of Action – Seabirds, and working to implement the revised document. Existing New Zealand research in the area of seabird bycatch includes mitigating seabird captures in trawl fishing nets and the effects of trawler fish waste management on seabird bycatch. Further, New Zealand's Department of Conservation is currently investigating methods to eradicate pigs from the Auckland Islands.

#### **Norway**

At the moment Norway does not consider it feasible to employ bycatch observers on Norwegian vessels operating in the Agreement area. However, as the national focus on the issue is increasing there is now a focus on methodology. A long standing monitoring programme for bycatch of marine

mammals is an example on how the industry itself can be engaged. In this programme bycatch data on seabirds have also been included in this reporting scheme. A separate programme focusing on the issue of bycatch in the NE-Atlantic has just started. The initial phase mainly includes information gathering and a workshop. The conclusions of the workshop can be found in NINA report: Bycatch of seabirds in Norwegian Fisheries. Existing knowledge and proposal for monitoring. 382:62 pp (2008), www.nina.no. The report concludes that except for longline fisheries the knowledge and mitigation measures are scarce and hardly implemented. The potential impact on seabird population is however expected to be of significance, in particular relating to red listed species.

#### **South Africa**

In 2007, South Africa adopted a Policy on the Management of Seals, Seabirds and Shorebirds, which will guide development of a revision of the Act relating to seabirds. The current and anticipated Acts afford full protection to all seabirds breeding at the Prince Edward Islands (Marion and Prince Edward), thus including species listed within ACAP. Additionally, all seabirds are protected within South African territorial and Exclusive Economic Zone (EEZ) waters. All ACAP species within South African waters are therefore fully protected, whether they are South African breeding species or not. Also in 2007, South Africa announced the listing of its sub-Antarctic Prince Edward Islands under the Convention on Wetlands of International Importance especially as Waterfowl Habitat of 1971 (commonly known as the Ramsar Convention). This is South Africa's 19th Ramsar site and its first away from the African Continent. It is the first Ramsar site to be situated in the sub-Antarctic Region, although it is not the farthest south. In 2008, South Africa adopted its National Plan of Action - Seabirds, indicating measures required to reduce the bycatch of seabirds in its commercial fisheries. In an effort to ensure compliance it also introduced a ceiling catch of 25 birds per permit holder in certain longline fisheries, at which level a permit holder is required to stop fishing for the remainder of the year, unless it can demonstrate it complied with all conditions relating to the mitigation of seabird bycatch. South Africa continued to monitor its populations of ACAP-listed albatrosses and petrels at Marion Island. Amongst surface-breeding species, numbers of Dark-mantled sooty albatross Phoebetria fusca and Southern giant petrel Macronectes giganteus appear to be decreasing but those of other species to be stable or increasing.

# **United Kingdom**

In March 2006 a workshop was held in the Falkland Islands (Islas Malvinas)<sup>8</sup> to consider priorities for the conservation of the albatrosses and petrels of the UK South Atlantic Overseas Territories (SAOTs). The outcomes of the workshop are contained in a report outlining the priorities for the management and conservation of albatross and petrel species on land and sea in and around the SAOTs. One of the recommendations of the report was that an ACAP officer for the UK SAOTs be appointed, which took place in March 2008. Mitigation measures continue to be successful in reducing seabird mortality in the longline fisheries of the Falkland Islands (Islas Malvinas) and South Georgia (Islas Georgias del Sur), and are in the process of being developed in the fisheries around Tristan da Cunha. A process is currently underway to improve the estimate of seabird bycatch, and to improve the observer protocols for monitoring seabird bycatch, in the trawl fisheries of the Falkland Islands (Islas Malvinas). An IPOA-Seabirds assessment for all three commercial fisheries operating in South Georgia (Islas Georgias del Sur) and South Sandwich Islands (Islas Sandwich del Sur) was recently (2008) completed, which confirmed that seabird bycatch in all commercial fisheries was negligible and indicated that it is currently unnecessary to develop a NPOA-S for these fisheries.

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<sup>&</sup>lt;sup>8</sup> "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".

#### **United States of America**

The United States has taken a number of actions relevant to ACAP's objectives. U.S. and Japanese collaborative efforts have resulted in development of successful methods for translocation of Shorttailed albatross chicks. U.S. scientists are continuing research on mitigation measures for demersal and pelagic longline fisheries. Research on demersal longlines mitigation has resulting in refined requirements for gear construction to improve effectiveness of mitigation devices, and elimination of mitigation requirements where they were unnecessary to minimize regulatory and cost burdens. Research was also initiated on trawl fishery overlap with foraging albatrosses in Alaska and testing gear that can effectively reduce trawl warp cable interactions with seabirds. U.S. scientists contributed to BirdLife International's Global Procellariiform Tracking Database which has proven to be an effective tool in identifying fisheries that may potentially impact seabirds. U.S. activities at RFMO meetings were consistent with U.S. goals for international seabird conservation, and ACAP's objectives, including active participation in negotiations of mitigation measures, encouraging other key members to work collaboratively to develop mitigation measures, and supporting assessments of seabirds affected by fisheries. In addition, the U.S. provided species information on the three north Pacific albatross species to assist ACAP Parties in considering whether or not to list these species.

# ANNEX 2. Priorities for Future Research identified by each Working Group

The Working groups were asked to identify future research priorities to better enable the conservation of albatrosses and petrels. Some of these priorities have been incorporated into recommendations earlier in this document.

# 1. Breeding Sites Working Group

- (1) Studies on the impacts of introduced species at breeding sites of ACAP species, particularly where the effect is unknown, and on the development of effective techniques for their eradication.
- (2) Studies on the impacts of pathogens and parasites on ACAP species and, if practical, on the development of effective treatments.

# 2. Status and Trends Working Group

- (1) Censuses and long-term demographic studies of ACAP species, particularly for those populations where recent data are unavailable.
- (2) Maintenance of long term-population studies on ACAP species.
- (3) Studies of foraging distribution of ACAP species for populations where comprehensive information has not yet been collected (distribution of different age and sex classes, and during both breeding and non breeding seasons)

# 3. Seabird Bycatch Working Group

# 3.1 Research priorities for pelagic longline fisheries

Highest priority research areas for pelagic longline gear:

- (1) Completion of the research and development of the underwater bait setting capsule, including testing hook retention of baits deployed with the capsule, and determining operational effectiveness, including fish capture success. Test effectiveness of underwater setter compared to conventional surface setting from the stern and surface setting from the side of vessels.
- (2) Development of best-practice designs for bird scaring lines. What is the effect of tori line design (light line versus 'normal' line) and aerial extent (short versus long) on seabird capture rates and incidence of mainline entanglement?
- (3) Determination of effective line-weighting regimes, by examining the effect of swivel weight and leader length on baited hook sink rate and seabird mortality.
- (4) Development of practical and effective methods to reduce seabird by-catch in the dolphin fish longline fishery. Initial efforts to focus on testing operational aspects of line weighting and exploring the practicality of tori line use. Investigations should also involve an initial assessment of the nature and extent of seabird by-catch in the Peruvian and Ecuadorian coastal gill net fisheries.

#### 3.2 Research priorities for trawl fisheries

Based on the discussions of the SBWG the following four research areas were identified as the highest priority to reduce seabird bycatch in trawl fisheries:

- (1) Offal discharge management (e.g. meal plant, batching, discharge in areas not adjacent to warp cables)
- (2) Methods to reduce seabird entanglements during hauling.
- (3) Improving the performance of streamer lines (e.g. towed devices that perform better in cross winds, flexibility in attachment point to account for wind variation)
- (4) The effectiveness of net binding and net weighting

# 3.3 Research priorities for demersal long-line fisheries in the Southern Hemisphere

- (1) Side setting is largely untested in demersal fisheries, especially in the Southern Ocean, where the seabird assemblages include proficient diving seabirds.
- (2) Improvements to the current design of shooting tube to increase the depth at which the line is set, especially during rough seas. Also need to investigate optimal use of device together with other mitigation measures (e.g., bird scaring lines and weighted lines).
- (3) Further trialing of paired (or more) streamer-lines in fisheries which currently only use single streamer lines.
- (4) Test broader applicability of Cachaloteras and test impact on fish catch.

# 4. Taxonomy Working Group

- (1) completion of initial taxonomic review of ACAP listed species, monitoring of literature pertinent to any further review;
- (2) construction and maintenance of morphometric and plumage database;
- (3) maintain the bibliographic database and review scientific literature for research relevant to the taxonomic status of ACAP listed species