

Albatross and Petrels in the South Atlantic: Conservation Priorities



Proceedings of an International Meeting
for UK Overseas Territories

Falkland Islands
12 - 16 March 2006



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1. Introduction

This International Meeting formed part of the Falklands Islands Albatross and Petrel Programme. This Programme, run by Falklands Conservation, is supported with grant aid from the Foreign & Commonwealth Office Overseas Territories Environment Programme (OTEP) and the Falkland Islands Government (FIG).

The Meeting focussed on the responsibilities and obligations of Parties to the Agreement for the Conservation of Albatross and Petrels (ACAP) and aimed to identify priorities for the management and conservation of albatross and petrel species on land and at sea in and around the UK Overseas Territories in the South Atlantic. Relevant research needs were prioritised and, where possible, costed. The Meeting also examined the interaction between relevant Overseas Territories and the mainland UK in order to maximise future co-ordination. The Workshop provided a prime opportunity to forge strong inter-territory relationships.

The issue of fishery by-catch of albatross and petrel species crosses international boundaries and requires multilateral action among the UK and its Overseas Territories, South American and South African nations and organisations. The co-ordinated collection of seabird mortality data in fisheries in the South Atlantic and the implementation of effective mitigation measures were priority topics.

1.1 Aims of the meeting

- Define the current level of knowledge within the UK Overseas Territories and adjacent regional partners and who holds relevant data.
- Define the Overseas Territory/regional stakeholders and the internal process of responsibility and reporting.
- Establish the relationship between internal reporting and external reporting to UK, the Advisory Committee and the ACAP secretariat and determine the means of direct input from Overseas Territories and the voluntary sector.
- Define where gaps in knowledge, conservation and reporting exist and determine how this may be resolved.
- Prioritise these gaps and examine sources of available funding with a view to establishing a long-term work programme to meet the set priorities.
- Establish the possibilities for a unified approach to implementing ACAP in the South Atlantic, including through bi and multi-lateral initiatives.

1.2 Meeting structure and process

The Meeting noted with pleasure the attendance of representatives of all relevant UK OTs and of organisations already involved in ACAP-related work in Brazil, Chile, South Africa and USA. It recognised the difficulties (and personal costs involved) in the attendance of some representatives (not least from Tristan da Cunha). It regretted the absence of any direct representation from Defra, the lead UK Government department for ACAP issues.

A list of all attendees (with addresses and representation) is attached (Annex 1). The Meeting was divided into two parts. The first part comprised a series of presentations designed to provide up-to-date background information on:

- The ACAP Agreement and its implementation mechanisms in practical terms;
- The role of the UK government, especially Defra;
- Perspectives on ACAP from the UK OT Governments;
- Current land-based ACAP-related activities in the UK OTs;
- Current at-sea ACAP-related activities relevant to UK OTs (including presentations from South America, Brazil, Chile, Southern Africa and USA);
- Current international initiatives relevant to ACAP implementation (e.g. status of FAO-NPOA-Seabirds, interactions with RFMOs, global and regional intergovernmental and non-governmental programmes).

The programme for this first part of the Meeting, together with abstracts of presentations, is attached as Annex 2. The full text of most presentations is available on the accompanying CD. (Users of this material are requested to pay close attention to specific restrictions on use of hitherto unpublished material. In general, duplication and dissemination of this material requires the explicit permission of authors/data holders, as indicated on the CD.)

To supplement the presentations, participants supplied a considerable range of background material, including reports of meetings of ACAP and its working groups and a range of published and unpublished papers and documents relating to albatrosses and petrels and their conservation (see Annex 3). Some of these texts are available on the accompanying CD.

The second part of the Meeting was a workshop on ‘Priority regional objectives for the conservation of albatrosses and petrels’, divided into seven main sessions covering:

- Breeding sites;
- Population status and trends;
- Foraging ranges and area;
- Fishery-related issues;
- Education and public awareness;
- Data;
- Implementation and resources.

The list of potential contents of each session and those responsible for facilitating and reporting outcomes is at Annex 4. A list of acronyms used is provided at Annex 4.5.

2. Workshop report

2.1 Introduction

The aim of this report is to provide an assessment of the main tasks and actions needed to improve the conservation status of albatrosses and petrels in the South Atlantic. In order to assist decision-makers, particularly in the UK and Overseas Territory Governments, an attempt was made to indicate the relative priority of each task and to provide very approximate (often only indicative) estimates of the resources necessary to accomplish them. Some attempt was also made to indicate the institutions or organisations with particular responsibility or interest in undertaking particular tasks and actions. Inevitably this assessment is preliminary and incomplete but should provide an excellent basis for future discussion amongst stakeholders and for development into a full work programme.

In most cases the report does not attempt to provide any summary of its analysis and review of the background materials available. The recommendations are based mostly on a combination of the background information available and on the knowledge and expertise of the participants.

Each of the seven subsequent sections of this report starts with a brief boxed summary of ACAP requirements. These are drawn both from the Agreement text, its Action Plan (AP) and any actions agreed by the Meeting of Parties. This summary is only an interpretation of the source texts, to which readers are referred for further details. While parts of this summary were available to workshop participants, it was not reviewed in detail and, inevitably, some potential tasks and actions will have been overlooked. It should also be noted that relative priorities and estimates of resource requirements are often extremely approximate. The estimates and assessments are specifically for work on the ACAP species. In many cases these are likely to be implemented as part of larger programmes addressing wider biodiversity issues, which will affect both the priorities and the costs.

It is hoped, however, that the recommendations in this document can readily be developed into a resource-based action plan to guide the ACAP implementation of priorities and programmes of the United Kingdom and the United Kingdom Overseas Territories, at least for the next 3-5 years.

2.2 Breeding sites

In this section, the Workshop focussed principally on issues of site protection and management, particularly eradication of non-native predators and competitors (and minimisation of risk of new introductions) and reduction of disturbance to species and habitat. In addition, a special session was held to review the nature and content of the database proposed by the ACAP Working Group on Breeding Sites (See Data section).

ACAP requirements: Breeding sites

1. Conserve and, where feasible and appropriate, restore those habitats that are of importance to albatrosses and petrels (Art III, 1a).
2. Protect breeding sites, develop management plans for those sites (AP 2.2.1).
3. Prevent introductions, eliminate or control non-native species detrimental to albatrosses and petrels (Art III, 1b).
4. Control tourists, researchers (AP 3.4).
5. Prohibit the deliberate taking of, or harmful interference with, albatrosses and petrels, their eggs, or their breeding sites. Exemptions are possible, but any Parties granting such exemptions shall submit full details of them to the Secretariat (Art III 2).
6. Develop and implement measures to prevent, remove, minimize or mitigate the adverse effects of activities that may influence the conservation status of albatrosses and petrels. These to include appropriate use of environmental impact assessment (Art III 1c; AP3.1).
7. Initiate or support research into the effective conservation of albatrosses and petrels (Art III 1d).
8. Contribute to UK report to Secretariat (to Advisory Committee to each session of Meeting of Parties). The report should cover all above points as expanded upon in the action plan and any other relevant points. Specifically the Advisory Committee aims to include in its report:
 - b) identification of internationally important breeding sites;
 - h) reviews of the status at breeding sites of introduced animals, plants and disease-causing organisms known or believed to be detrimental to albatrosses and petrels;
 - i) reviews of the nature of, coverage by, and effectiveness of, protection arrangements for albatrosses and petrels;
 - o) identification of gaps in information as part of the above reviews, with a view to addressing these in future priorities.

Breeding sites working group. Submit data on each breeding site (this includes information on presence of introduced species); initiate studies to fill gaps in knowledge.

2.2.1 Recommendations

General

1. All UK OTs should consider extending protection of (main) breeding sites/areas to immediately adjacent marine habitat (to protect inshore rafting aggregations and to minimise disturbance from coastal traffic).
2. Investigate potential for extension of EU Birds and Habitats Directive to UK OTs, specifically in respect of Scientifically Protected Areas (SPAs) and their analogues in the marine environment.

British Antarctic Territory

1. Protect important southern giant petrel colonies through the system of Antarctic Protected Areas. To do the appropriate assessment will require publication of the breeding site inventory and completion of the SCAR-GEB Antarctic IBA inventory. *LOW priority, trivial cost.*
2. Management plans for such protected areas should take account of sensitivity of giant petrels to disturbance from visitors, aircraft and researchers. Management prescriptions of 'Site Guidelines' for tourist visitor sites containing giant petrels should ensure minimum disturbance of this species. *LOW priority; trivial cost*
3. Need to investigate current and potential impact of fur seals on giant petrels at important breeding sites and, where appropriate, consider necessary management actions at high priority sites. *LOW priority; 1 person-year*

Falkland Islands

1. Identify the wildlife recommendations contained in the new Biosecurity Strategy and its biosecurity documents. *HIGH priority; low cost*
2. Prevent introduction of pests and diseases: strengthening of implementation of current, recently updated legislation. In particular, develop a document for implementation of quarantine procedures. *HIGH priority; low cost*
3. Identify frequently visited rat (rodent?)-free, ACAP species sites and highlight key susceptible sites. Inter-island movements need adequate rodent quarantine measures, as does FIPASS. *HIGH priority; low cost on measures, implementation medium cost (i.e. service provider for transport between islands)*
4. Communicate with (and, where appropriate, educate) landowners/industry/government/military over the importance of biosecurity issues at an inter-island level. Dialogue with landowners should be sensitive and any set of generic guidelines for industry and landowners from FIG would need careful wording and explanation. *HIGH priority; medium cost*
5. Eradicate rodents (note that no key ACAP breeding sites or species are currently under threat in the Falklands). *LOW priority; high cost*

6. Impact of visitors, tourism, and military: adoption of IAATO guidelines for landings outside Stanley would be an appropriate standard of environmental protection and visitor management. Although IAATO's self-policing policy successfully maintains the high standard of environmental protection afforded by their guidelines, there was support for the idea that FIG confirm for themselves that standards were effectively being met including compliance with legislation and regulations. An observer system, similar to South Georgia, where Government may place an observer on ships, should be considered. *Tourists: MEDIUM priority; 2 person-weeks, Military: MEDIUM priority; 2 person weeks + ongoing (for each new garrison deroulement)*
7. Introduce FIG Post-Visit Reports (PVRs) for all ACAP sites, both private- and government-owned, in order to start long-term monitoring of visit or levels at sites. Use either the Antarctic Treaty PVRs, or purpose-designed forms. *MEDIUM priority; low cost*
8. Work with landholders to support and / or enhance the long-term protection (and management as appropriate) of ACAP breeding sites, including management of pressures associated with grazing practices. Wherever possible, develop management plans for these sites, providing assistance (e.g. within the rural diversification scheme) where appropriate. *HIGH priority, medium – high costs, 1 person year over 5 years*

South Georgia

1. Conservation and environmental specialists are fully consulted in the new revision of conservation legislation and regulation. *MEDIUM priority, trivial cost*
2. A stakeholder-representative Environment Committee (or similar) be appointed to advise GSGSSI. *HIGH priority, low cost.*
3. Review existing Protected Area (Managed Area) system, re-evaluate existing Protected Areas (and prepare management plans for each), reassess and revise the present Environmentally Sensitive Area (ESA) system with stakeholder consultation. *HIGH priority, 1+ person-year.*
4. Maintain and strengthen the current policy of preventing the introduction of pests and diseases, especially in respect of rodents and avian diseases, and inter-island traffic of commercial and private vessels. In particular, develop a document for implementation of quarantine procedures. *HIGH priority, low cost policy, higher implementation costs to operators.*
5. Assess the biosecurity risk of imported materials. *MEDIUM priority, low cost policy*
6. Eradicate rats and reindeer at, as a minimum, key white-chinned petrel breeding sites. *LOW priority (for ACAP species), high cost (£10-15 million)*
7. Continue investigation of potential threats (e.g. impact of visitors and fur seals) to ACAP species at key sites (e.g. Albatross and Prion Islands) and where appropriate, develop management plans. *HIGH priority; medium cost (£100,000 per annum).*

South Sandwich Islands

1. Develop a visit policy for giant petrel breeding sites. *LOW priority, low cost*

Tristan da Cunha group

1. Eradicate mice on Gough Island. *HIGH priority, £5 million*
2. Encourage new technology for eliminating or minimising mice access to nests. *HIGH priority, low cost*
3. Eradicate rats at Tristan. *MEDIUM priority (for ACAP species), high cost (£5 million)*
4. Implement quarantine legislation and procedures to prevent introduction of pests and diseases, especially in respect of rodents and avian diseases. In particular, develop a document for implementation of quarantine procedures. *HIGH priority, 2 person-months*
5. Re-establish Tristan albatross on Tristan: this is an aspiration for Tristanians but has a high cost and high risk of failure. *LOW priority, high cost*
6. Assess effects of rodent predation on grey petrels on Gough. *HIGH priority, high cost (£19,000 salaries, £5,000 costs).*

2.3 Status and trends of populations

The Workshop mainly considered, in the light of available data, the priorities for survey (census), monitoring and long-term population studies.

ACAP requirements: Status and trends

1. Initiate or support research into the effective conservation of albatrosses and petrels (Art III 1d)
2. Undertake relevant research and monitoring (AP 4.1).
3. Contribute to UK report to Secretariat (to Advisory Committee to each session of Meeting of Parties). The report should cover all above points as expanded upon in the action plan and any other relevant points. Specifically the Advisory Committee aims to include in its report:
 - a) assessments and reviews of the status of populations of albatrosses and petrels, including an assessment of population trends of the species, especially those in poorly known areas and of species for which few data are available;
 - b) identification of internationally important breeding sites;

Status and trends working group – collect and collate most up-to-date population data for each species.

The UK has a requirement under ACAP to monitor status and trends of species breeding in OTs (see 3a in box). Although effort has often been concentrated on species in rapid decline, it is also important to monitor those with more favourable conservation status in case of changes in circumstance, and also to understand natural variation in survival and breeding success. More comprehensive demographic studies are required to diagnose properly the underlying causes of population change. However, for certain species (sooty and light-mantled sooty albatross, southern giant petrel, white-chinned and grey petrel) this may not be possible for logistical reasons or high sensitivity to disturbance. In these cases monitoring may be limited to population size and trends. The following recommendations for UK OTs take account of such considerations and represent a range of low-high priority actions. A more detailed breakdown for each species and site is at Appendix 1.

2.3.1 Recommendations

South Georgia and South Sandwich Islands

1. Maintain BAS annual monitoring schemes and decadal all-island counts of selected ACAP species at Bird Island. *HIGH priority, £200,000 per annum*
2. Maintain (and extend to further species) annual monitoring of breeding numbers and success of wandering albatross, light-mantled sooty albatross, northern giant petrel, southern giant petrel and white-chinned petrels at Albatross and Prion Islands. *HIGH priority, £100,000 per annum*

3. Count breeding numbers of wandering albatrosses at Annenkov Island every 5 years. *MEDIUM priority, £20,000 on assumption of above.*
4. Photo-survey black-browed and grey-headed albatrosses every 5 years at sites other than Bird Island to confirm population trend. *MEDIUM priority, £100,000*
5. Census southern giant petrels at the South Sandwich Islands *LOW priority; medium cost (c. £100,000).*
6. As an adjunct to Albatross and Prion Island monitoring programme, determine population trends and breeding success of white-chinned petrels in areas with and without introduced mammals (rats and reindeer), (e.g. fieldwork at Maiviken and Husvik) every five years. *HIGH priority, £15-20,000*
7. Take advice on demographic monitoring by French, South African and Australian researchers and consider a full demographic monitoring programme for white-chinned petrels. *HIGH priority, low cost (first step only)*

Falkland Islands

1. Maintain annual monitoring of population size and demography of black-browed albatrosses at New Island. *HIGH priority £5,000 per annum*
2. Initiate annual monitoring of population size and demography of black-browed albatrosses at Steeple Jason Island. *HIGH priority, £10,000 per annum*
3. Survey (by photo- or ground-count) representative colonies of black-browed albatross and southern giant petrel annually. *HIGH priority, £10,000 per annum*
4. Count all black-browed albatross and southern giant petrel colonies every 10 years. *HIGH priority, £40,000*

Tristan da Cunha group

1. Monitor population trends and productivity/demography of Tristan, yellow-nosed and sooty albatross, Atlantic petrel and southern giant petrel, and commence grey petrels monitoring annually at Gough Island. *HIGH priority, £45,000 per annum*
2. Monitor population trends and demography of Atlantic yellow-nosed albatross annually at Tristan and Nightingale Islands. *HIGH priority, £10,000 per annum*
3. Monitor population trends of spectacled and grey petrels every 3-5 years on Inaccessible Island, and determine effects of rodent predation on breeding success of grey petrels. *Spectacled: HIGH priority, Grey: MEDIUM priority, £10,000*
4. Determine if grey petrel breeds on Inaccessible and Tristan. *MEDIUM priority, moderate cost, £10,000*

British Antarctic Territory

1. Initiate annual monitoring of population trends and breeding success, and carry out decadal all-island count of southern giant petrel at Signy Island. *MEDIUM priority, 10 person-days and overheads*
2. Request SCAR to coordinate efforts by Antarctic Treaty Parties to determine population status of southern giant petrel throughout Antarctic Peninsula Sector. *MEDIUM priority, no cost*

2.4 Foraging range and areas

The Workshop reviewed the priorities for acquiring data on foraging ranges and key foraging areas within these ranges. The suggestions arising from the first Meeting of the ACAP Advisory Committee (para. 12.3) were noted.

ACAP requirements: Foraging range and areas

1. Conserve and, where feasible and appropriate, restore those [marine] habitats, which are of importance to albatrosses and petrels (Art III, 1a).
2. Develop management plans for important areas at sea (AP 2.3.2).
3. Help ensure sustainability of food resources (AP 2.3.1 a).
4. Develop and implement measures to prevent, remove, minimize or mitigate the adverse effects of activities that may influence the conservation status of albatrosses and petrels [at sea]. These to include appropriate use of environmental impact assessment (Art III 1 c; AP3.1).
5. Initiate or support research into the effective conservation of albatrosses and petrels [at sea] (Art III 1d)
6. Collect reliable and verifiable data on interactions with fisheries (AP 4.2).
7. Contribute to UK report to Secretariat (to Advisory Committee to each session of Meeting of Parties). The report should cover all above points as expanded upon in the action plan and any other relevant points. Specifically the Advisory Committee aims to include in its report:
 - c) reviews to characterise, on the basis of the best available evidence, the foraging range (and principal feeding areas within this) and migration routes and patterns, of populations of albatrosses and petrels;
 - g) reviews of data on the distribution and seasonality of effort in fisheries which affect albatrosses and petrels;
 - o) identification of gaps in information as part of the above reviews, with a view to addressing these in future priorities.

2.4.1 Recommendations

1. Fill remote-tracking data gaps (listed in order of priority)
 - 1.1 Non-breeding and breeding adults from Tristan group (Atlantic yellow-nosed albatross, sooty albatross, grey petrel and spectacled petrel) *HIGH priority, costs: equipment £5,000 per species non-breeding, £25,000 per species breeding, £5,000 to get there, plus 2 person-years*
 - 1.2 Juveniles and pre-breeders of all species, especially because young birds may be particularly vulnerable to incidental mortality. Particular priorities: black-browed, grey-headed and

wandering albatrosses at South Georgia; Atlantic yellow-nosed albatross and sooty albatross at Tristan group; black-browed albatross at the Falklands. *HIGH priority, costs: £10,000 for devices per species, plus 6 person-months. £5,000 to process existing data from wandering albatross at South Georgia.*

- 1.3 Southern giant petrel from several sites, (Antarctic Peninsula region, Falklands, South Orkney Islands) but we recognise that most populations are increasing, data have been collected from the Peninsula but not incorporated and moreover they may be difficult to track. *LOW priority, costs: equipment £5,000 per species non-breeding, £25,000 per species breeding, £5,000 to get there, plus 2 person-years*
2. Analysis of spatial and temporal overlap between albatross and petrel distribution, fishing effort and RFMO boundaries. *HIGH priority, 6 person-months*
3. Identify drivers (e.g. bathymetric, oceanographic or fisheries) of seabird distribution. *MEDIUM priority, 2 person-years*
4. Assess representativeness of apparently important areas
- 4.1 Integrate data sources listed in Appendix 2. SW Atlantic is a prime candidate for a pilot study given the considerable volume of tracking and survey data already available. *MEDIUM priority, £80,000*
- 4.2 Further remote tracking studies. *MEDIUM priority, equipment £30,000 per species plus other fieldwork costs*
- 4.3 Analyse the best available data for some “case study” species e.g. wandering albatross data from South Georgia. *MEDIUM priority, 6 person-months*
5. Identify important areas for albatross and petrels at sea and identify a network of areas for their protection on the high seas. *MEDIUM priority, covered above*
6. Encourage at-sea surveys of seabird distributions off southern Africa and Brazil, Uruguay and northern Argentina. *MEDIUM priority, low cost to encourage, but implementation much higher (£100,000+ per study)*

2.5 Fishery-related Issues

The Workshop considered this topic under four main headings:

- Actions to improve the effectiveness of RFMOs, particularly in managing the environmental side effects of fishing, notably incidental mortality (by-catch) in longline and trawl fisheries. This discussion was principally directed at the International Convention for the Conservation of Atlantic Tuna (ICCAT), the main relevant high seas RFMO in the South Atlantic;
- Development and implementation of improved mitigation measures;
- Scope for improving certification of fisheries in respect of effects of environment, food chains and non-target species;
- Development and implementation of FAO-NPOA-Seabirds.

There was little discussion on the possible effect of fisheries as competitors for food resources, but the apparent start of new industrial fisheries for anchovy on the northern Patagonian Shelf (a prime wintering ground for South Atlantic albatrosses and petrels) was noted with concern and requires further investigation.

ACAP requirements: Fishery related issues

1. Develop management plans for important areas at sea (AP 2.3.2).
2. Help ensure sustainability of food resources (AP 2.3.1 a).
3. Take appropriate operational, management and other measures to reduce or eliminate the mortality of albatrosses and petrels resulting incidentally from fishing activities (AP 3.2.1).
4. Adopt measures agreed in other fora for the conservation of albatrosses and petrels [at sea].
5. Help ensure others do the same. Take all measures to eliminate IUU fishing (AP 3.2.2).
6. Support the implementation of the actions elaborated in the FAO International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries, which complement the objectives of this Agreement (Art III 1h).
7. Tackle/avoid pollution (AP 2.3.1 b).
8. Initiate or support research into the effective conservation of albatrosses and petrels [at sea] (Art III 1d)
9. Collect reliable and verifiable data on interactions with fisheries (AP 4.2).
10. Contribute to UK report to Secretariat (to Advisory Committee to each session of Meeting of Parties). The report should cover all above points as expanded upon in the action plan and any other relevant points. Specifically the Advisory Committee aims to include in its report:

- d) identification and assessment of known and suspected threats affecting albatrosses and petrels [at sea];
- e) identification of existing and new methods by which these threats may be avoided or mitigated;
- f) reviews, and updating on a regular basis, of data on the mortality of albatrosses and petrels in, *inter alia*, commercial, and other relevant fisheries;
- g) reviews of data on the distribution and seasonality of effort in fisheries which affect albatrosses and petrels;
- i) reviews of the nature of, coverage by, and effectiveness of, protection arrangements for albatrosses and petrels [at sea].

2.5.1 Regional Fishery Management Organisations (RFMOs)

Given the importance accorded to interactions with RFMOs in the ACAP agreement Action Plan (Annex II paragraphs 3.2.2, 3.2.4 and 3.2.4) and priority given to this work at ACAP MOP 1 and the ACAP AC, the following was agreed.

2.5.1.1 Recommendations

1. Ensure prompt implementation of the ICCAT Seabird Resolution 02-14, in particular the assessment by ICCAT's Scientific Committee of the impact of incidental catch of seabirds resulting from the activities of all vessels fishing within ICCAT's jurisdiction. The assessment must address the spatial and temporal overlap between seabird foraging ranges and fishing effort and the potential effect of interactions on the conservation status and trends of seabird populations.
(*HIGH priority, 6 person-months*).
2. Revise the standing resolution of ICCAT on the incidental mortality of seabirds to mandate effective conservation action within defined timeframes.

Actions to include:

- 1. Governmental**
 - 1.1 UK with other EU ACAP Parties (France, Spain) to seek to ensure better engagement by European Commission in environmental affairs relating to external fisheries, especially to address the matter of seabird interactions / mitigation in RFMOs.
 - 1.2 Encourage OTs to resume their involvement (membership) in ICCAT and ensure that UK representatives support implementation of the assessment. (In the absence of direct fisheries interests, the UK and OTs should be encouraged to join on the basis of environmental concerns in relation to affected OT species.)
 - 1.3 UK to seek to ensure that other ACAP Parties/Range States (such as Brazil, Uruguay and USA) support or initiate measures to reduce seabird by-catch within relevant RFMOs.
 - 1.4 National/EU delegations should include by-catch expertise and represent non-fishing OTs with breeding populations of ACAP species.
 - 1.5 Gain support of international and national fishing companies to influence their national delegations.

2. NGO

- 2.1 NGOs to coordinate international and national collaboration on these issues.
- 2.2 Update Birdlife document submitted to the 2005 meeting of ICCAT By-catch Subcommittee and the Standing Committee on Research and Statistics (RCRS) to include overlap between fishing effort and foraging range; to link potential associated by-catch with conservation status and population trends for ACAP species. *HIGH priority, cost £5000.*

3. Other RFMOs

- 3.1 UK should consider membership of CCSBT for environmental reasons.
- 3.2 Securing ACAP representation and forging arrangements with key RFMOs (CCSBT, IOTC, WCPFC, ICCAT, CCAMLR as outlined in ACAP Article 11.3) was recognised as potentially the most productive mechanism for achieving OT seabird conservation objectives on the high seas *HIGH priority, cost 3 person weeks + travel*
- 3.3 ACAP Secretariat to investigate involvement in the planning of, and participation in, the January 2007 meeting of Tuna Commissions in Japan. *HIGH priority, 6 person-weeks + travel*
- 3.4 SEAFO: maintain a watching brief on developments. *LOW priority, 1 person-week*

4. General

- 4.1 Appoint dedicated person in UK (DEFRA-Fisheries) to represent OT fisheries issues, particularly the environmental components thereof. *HIGH priority, 1 person-year (£50,000)*

2.5.2 Development and implementation of by-catch mitigation

2.5.2.1 Recommendations

Falkland Islands

1. Ensure full implementation of the Falkland Islands POA for trawl and longline fisheries and development of a FIPOA for the jig fishery including the commitments to the further by-catch mitigation development and observer coverage and specifically tasked seabird observers. *MEDIUM priority, 1 person-year*
2. Promote research into potting technologies (e.g. for Patagonian toothfish). *HIGH priority, low cost (industry doing)*

Tristan da Cunha group

1. Lack of island infrastructure and resources has impeded developments within the fishery. It is imperative that effective resources and communications be addressed at a UK level (see later sections).

Southern Africa

1. Express concern regarding the extremely high level of seabird by-catch in the MSC certified South African hake trawl fishery. *HIGH priority; cost low.*
2. Investigate known/potential levels of by-catch in analogous Namibian longline (demersal and pelagic) and trawl (mid-water and demersal) fisheries. *HIGH priority; 1 person year per fishery plus operational costs (total of £15,000 per fishery)*
3. Develop by-catch sampling and mitigation in Namibian fisheries. *High priority; 1 person year per fishery plus operational costs (total of £15,000 per fishery)*
4. Investigate potential levels of by-catch in Angolan fisheries. *Medium priority (operationally very difficult); 1 person year per fishery plus operational costs (total of £15,000 per fishery)*
5. Continue observer-based monitoring of by-catch in South African fisheries

6. Continue assessment, mitigation implementation and awareness campaign in South Africa. *High priority; 1 person year per fishery plus operational costs (total of £15,000 per fishery) on-going need*

2.5.3 Market-driven forces

There is a need to strengthen Marine Stewardship Council certification processes particularly with regard to non-target species. Assessments should be precautionary where there is insufficient dedicated by-catch monitoring information.

2.5.3.1 Recommendations

1. ACAP Secretariat and Marine Stewardship Council should establish formal links in order to ensure that the MSC certification process receives best possible information on ACAP by-catch issues for all relevant fisheries. *HIGH priority, trivial cost*
2. ACAP promote effective certification processes and market driven initiatives to limit the market entry of IUU fisheries products, and thus reduce their economic return. *MEDIUM priority, medium cost*
3. Certification processes and market driven initiatives that provide economic incentives (market entry, sale volume or price) to managed fisheries with by-catch assessments should be pursued in manners appropriate to the main markets of North America, Europe and Asia/Far East.
4. Support/encourage more fisheries to become certified, subject to appropriate environmental and by-catch review. *MEDIUM priority, low cost*

2.5.4 FAO National Plan of Action – Seabirds (NPOA-S)

The detail of best practice guidelines, in relation to mitigation of incidental mortality of seabirds, for inclusion in NPOA-S are in the paper provided by BirdLife to the FAO COFI meeting in March 2005 (Appendix 2).

2.5.4.1 Recommendations

General

1. ACAP to invite Brazil to report to the 2006 Advisory Committee meeting on levels of seabird by-catch in an expanding and little known artisanal fishery in Brazilian EEZ. *HIGH priority, low cost*
2. The BirdLife Albatross Task Force (Appendix 3) was recognized as a useful mechanism to provide capacity to facilitate the adoption of appropriate mitigation measures. The Task Force could underpin international initiatives such as IPOA-S and the delivery of aspects of the ACAP work programme. ACAP Secretariat and Parties were requested to support and where possible to assist in the implementation of the Task Force in fisheries under the jurisdiction of ACAP Parties and Range States. *HIGH priority, medium cost*
3. UK government (DEFRA) should develop bilateral and multilateral agreements to address specific by-catch issues, with particular priority to countries in southern Africa and southern South America. *HIGH priority, medium cost*
4. The UK, in collaboration as appropriate, should establish an effective fishery protection regime for the Tristan da Cunha group (in conjunction with St Helena), without which the

potential substantial seabird by-catch of ACAP species by IUU vessels will continue unabated. This regime is also essential to support the economy of these islands through increased licence revenue from regulated fishing vessels. *HIGH priority, high cost.*

Falkland Islands

NPOAs are in place for longlining and trawl fisheries. The workshop commended the rapid development and implementation of these NPOA by Fisheries Department and industry.

1. Ensure full implementation of the Falkland Islands POA for trawl and longline fisheries and development of a FIPOA for the jig fishery including the commitments to the further by-catch mitigation development and observer coverage and specifically tasked seabird observers. *MEDIUM priority, 1 person-year*

South Georgia

The achievements by GSGSSI (and CCAMLR) in reducing seabird by-catch in this area were commended. It was recognised that a formal NPOA for SGSSI was unlikely to be appropriate.

1. Develop, assess and disseminate FAO IPOA-S assessments for krill, icefish and toothfish fisheries. *HIGH priority, £10,000*

Tristan da Cunha group

1. Undertake an IPOA-S assessment for Tristan da Cunha. The assessment of the level of IUU fishing, including the potential role of remote sensing and opportunistic patrolling, will be a critical component of this process. Information from neighbouring ICCAT fisheries will be required. *HIGH priority, £5,000*

Southern Africa

1. Encourage South Africa to adopt NPOA-S.
2. Encourage Namibia to undertake and adopt NPOA-S.

Brazil

1. NPOA will be adopted shortly; encourage rapid implementation.

Chile

1. NPOA will be adopted shortly; encourage rapid implementation.

Other

1. BirdLife Global Seabird Programme to liaise with the ACAP Secretariat to coordinate input on behalf of the ACAP Parties into the review of FAO Circular 937, and incorporation of trawl, gill-netting and other fishing techniques into the IPOA-S. *HIGH priority; low cost.*

2.6 Education and awareness

For this session, the Workshop recognised that the topic of ACAP-related Education and Awareness has not been the subject of any previous discussion by ACAP (beyond developing the requirements set out below) nor do many relevant documents exist. Therefore this Workshop session attempted to review existing relevant UK and UK OT educational initiatives and material and then to produce some generic recommendations, chiefly to assist ACAP in developing its own programme.

ACAP requirements: Education and awareness

1. Exchange information and results from albatross and petrel, and other relevant, conservation programmes (Art III 1g).
2. Undertake exchange of expertise, techniques and knowledge (Art V f).
3. Ensure the existence and appropriateness of training for, *inter alia*, the implementation of conservation measures (Art III 1e)
4. Develop and implement training programmes on conservation techniques and measures to mitigate threats affecting albatrosses and petrels (Art V e).
5. Develop and maintain programmes to raise awareness and understanding of albatross and petrel conservation issues (Art III 1f).
6. Implement education and awareness programmes for users of areas where albatrosses and petrels may be encountered (Art V c).
7. Design and implement comprehensive programmes for public information in relation to the conservation of albatrosses and petrels (Art V d).
8. Promote the objectives of this Agreement and develop and maintain coordinated and complementary working relationships with all relevant international, regional and sub-regional bodies.
9. Contribute to UK report to Secretariat (to Advisory Committee to each session of Meeting of Parties). The report should cover all above points as expanded upon in the action plan and any other relevant points. Specifically the Advisory Committee aims to include in its report:
 - m) reviews of education and information programmes aimed at conserving albatrosses and petrels

Falkland Islands

School children

Environmental education is a high priority and well advanced in the Falkland Islands. By January 2007 all ages will have the benefit of the inclusion of environmental and native wildlife issues in their school curriculum. Watch Group, a children's environmental interest group involves children outside of school and includes visits to remote islands, including those where ACAP species breed.

Awareness of general public and tourists

There is widespread use of local media, newsletters and promotion by interest groups. General awareness is relatively good. Education of tourists is generally very good, but may differ between guides and vessels. IAATO have a high standard of education and most vessels use a specific presentation on albatrosses and threats to them (prepared by Dr. G. Robertson, Australian Antarctic Division).

Landowners

In order to fulfil their ACAP responsibilities, there is a need for FIG to contact land owners, particularly those who own sites where ACAP species breed.

South Georgia

There is environmental education material on www.sgisland.org and full multimedia briefing of all visitors.

British Antarctic Territory

The Educational Pack on Antarctica produced in 1999 between the Polar Regions Unit of the FCO and British Antarctic Survey has been completely revised. It is due to be launched as an inter-active web site (www.discoveringantarctica.org.uk) in London at the Royal Geographical Society on 7 June 2006, and thereafter in Edinburgh at the XXIXth Antarctic Treaty Consultative Meeting.

Tristan da Cunha group

School children

The school curriculum includes Tristan Studies that incorporates environmental issues. All children visit an albatross breeding colony. Every male is required to undertake a one-year apprenticeship at sea after completing school. The conservation officer gives a lecture each year to the children.

Tourists

All tourist vessels visiting Nightingale are required to collect a guide (one per eight tourists) from Tristan. A maximum of 100 passengers may disembark at Nightingale.

2.6.1 Education of fishers, fisheries managers, compliance officers, observers

There is extensive experience and a range of materials that exist in a number of languages. There is a need for information-sharing to maximise available resources and benefit from lessons learnt. This is especially important because of the many cultures involved.

Important foraging areas for ACAP birds breeding within the UK Overseas Territories include: Brazil, Uruguay and northern Argentina, Chile, South Africa, Namibia, high seas, particularly including priority fishing grounds for Asian countries. Information, training and education needs differ between these areas. Priority gaps were highlighted as follows:

- South Africa – need for training of observers and compliance officers;
- Namibia – need to raise awareness of fisheries managers;
- Brazil – there is a need to continue and support current successful initiatives such as Projecto Albatroz;
- Asia – education and training at all levels.

The approaches used to educate and communicate with the fisheries sector need to be tuned to the culture of each fishery. Lessons may be learned from other experience in other fisheries, but there is no single correct approach. For example Asian fisheries are usually very hierarchical, whereas

many “western” fisheries are more entrepreneurial and individualistic. A key and important issue is the need for an understanding of culture before new ideas can be introduced. Most experience of working with fisheries shows that successful initiatives rely on the identification of the right, culturally sensitive, person. Identification of lead individuals within the industry is also important. Face-to-face interaction is more effective than handing out leaflets or other information in isolation. A cost effective way to implement education in the fishing industry is to educate and inspire observers. Another option is to influence training courses already established e.g. Master ticket course.

2.6.2 Recommendations

1. The ACAP secretariat should collect materials to support all forms of education of the general public, fishing industry (including observers, skippers, crew, compliance officers and fisheries managers), making available good examples of education materials on their website. *MEDIUM priority, low cost*
2. UK to encourage other ACAP Parties and Range States to develop long-term education strategies. A particular priority may be to ensure continuation of Brazil’s Projecto Albatroz. *HIGH priority, £50,000 per country*
3. Develop a guide and presentation (in relevant languages) explaining the ACAP agreement text to help those implementing or considering ratifying ACAP. *HIGH priority, low-medium costs (mostly available)*
4. Improve communication facilities (including internet access) for Tristan. *HIGH priority, £100,000*
5. Encourage (and assist as appropriate) FIG to embark on discussions with relevant landowners on roles and responsibilities in relation to breeding sites for ACAP species. *High priority, low cost*
6. OTs to make educational / training material available amongst themselves to share good practice *MEDIUM priority, low cost*

2.7 Data acquisition, management, transmission and dissemination

ACAP requirements:

Data acquisition, management, transmission and dissemination

1. Collect reliable and verifiable data on interactions with fisheries (AP 4.2).
2. Exchange information and results from albatross and petrel, and other relevant, conservation programmes (Art III 1g).
3. Develop systems for collecting and analysing data, and exchanging information (Art V a)
4. Exchange information regarding adoption and enforcement of legislative and other management approaches to conservation of albatrosses and petrels (Art V b).
5. Contribute to UK report to Secretariat (to Advisory Committee to each session of Meeting of Parties). The report should cover all above points as expanded upon in the action plan and any other relevant points. Specifically the Advisory Committee aims to include in its report:
 - a) assessments and reviews of the status of populations of albatrosses and petrels, including an assessment of population trends of the species, especially those in poorly known areas and of species for which few data are available;
 - f) reviews, and updating on a regular basis, of data on the mortality of albatrosses and petrels in, *inter alia*, commercial, and other relevant fisheries;
 - g) reviews of data on the distribution and seasonality of effort in fisheries which affect albatrosses and petrels;
 - h) reviews of the status at breeding sites of introduced animals, plants and disease-causing organisms known or believed to be detrimental to albatrosses and petrels;
 - o) identification of gaps in information as part of the above reviews, with a view to addressing these in future priorities.

Because many data issues had already been identified and highlighted in previous parts of the Workshop, this session was mainly devoted to further consideration of the provision of data on breeding sites, as these data underpin many aspects of the work of ACAP.

The ACAP Working Group on Breeding Sites has recently developed a data capture module for a relational database on breeding sites. This was recently circulated to all ACAP Parties with a request to enter data for at least 50% of the albatross and petrel breeding sites within their jurisdiction by 15 April 2006.

Dr S Waugh (chair of ACAP Breeding Sites Working Group) was commended for organising the development of this very comprehensive database. The group undertook a trial entry of 2 sites to the database as a basis for discussion. The data entry was found to be relatively straightforward

although a number of suggested improvements were made to aid data entry and provide clarification of some of the fields. These were provided to Dr Waugh via the ACAP Secretariat.

A couple of issues of substance emerged. There was some discussion about the definition of 'site' in the existing protocol as a single species breeding location. While this offers great flexibility, there was concern expressed that analyses will be extremely difficult if data is submitted by different Parties at different scales. It was agreed that ideally a site should be consistent with the smallest unit at which current or likely future management action is undertaken or envisaged. In most cases it is likely that sites would contain several colonies (and sometimes several ACAP species). Many sites would conveniently be co-extensive with a complete island. However treating a whole island-group as a site would rarely be appropriate because most UK OT archipelagos (island-groups) contain a number of well-defined groupings of colonies and/or islands. It was recognised that particular problems were posed by less colonial species (e.g. giant petrels) and especially by burrowing petrels. In many cases expertly judged, rather than criteria-based, site boundaries may be necessary.

It was agreed that resources were not currently available to permit the UK Overseas Territories to provide detailed site data for 50% of sites by 15 April at a fine scale. It was suggested that, for discussions at the second meeting of the ACAP Advisory Committee (AC2; 2-8 June 2006 in Brasilia), ACAP Parties should be encouraged to complete the database on an island group basis (with some examples of sites at a finer scale), and that further finer scale entries should be deferred pending development of the database.

It was suggested that key issues for discussion at AC2 would be defining the purposes of the database and clarifying the kind of analyses that might be undertaken with the breeding sites data and standardising (as far as possible) the definitions of sites.

It was important to ensure efficient interaction between the breeding sites database and that for the status and trends data.

2.7.1 Initial recommended actions for the UK overseas territories

These were agreed as follows:

1. Feedback to Susan Waugh via Mark Tasker:
 - 1.1 completed database entries for the whole of each archipelago in UK OTs
 - 1.2 completed database entries (using the current version) for a selection of sites from each island group:
 - Falklands – Oli Yates;
 - South Georgia – Sally Poncet and Richard Phillips;
 - South Sandwich Islands – Sally Poncet;
 - Tristan da Cunha group – John Cooper.
 - 1.3 Lack of direct access to database by Tristan was recognised as being a major constraint
2. Discussions to be undertaken on the resources and timescales required in order to complete breeding sites forms for all sites. *HIGH priority, costs not yet certain but at least medium*

2.8 Implementation and resource issues for UK overseas territories

This session was based on discussion of an outline document prepared by those attending the meeting with official responsibilities relating to the implementation of ACAP in the Overseas Territories. Particular topics in the remit to this group were:

- Communications within and between OTs;
- Representation of OTs at ACAP meetings;
- Resource issues for OTs;
- Interactions between OTs and metropolitan UK government departments;
- Coordination and collaboration with non-OT stakeholders, especially in the South Atlantic.

2.8.1 Recommendations

OT communications

1. Efficient communication between the Overseas Territories is critical to the implementation of ACAP. Relatively good communications exist for the Governments of Falklands, South Georgia, St Helena and Ascension.
2. Communications with Tristan da Cunha are extremely limited and expensive. This poses a serious problem to the implementation of ACAP in this OT. At present only a limited and unreliable channel of communications exists for data transfer. The Territory is often reliant on assistance from third parties in South Africa.
3. Unless the Tristan National Resources Department has an efficient Communications system in place (see earlier), the territory will struggle to meet its obligations to ACAP. Data transfer is the key issue.
4. The problem of limited communications, lack of guidance on strategic and practical issues and unrealistic timetables for comment on documents, makes it difficult to contribute in advance of ACAP MOPs etc. There is often a particular problem in OTs with receipt of large file attachments (though these are not necessary as most documents can be downloaded from the ACAP website).

Representation at ACAP meetings

1. All OT's have a right to be represented in the UK delegation at meetings, though this requires thorough preparation and co-ordination in advance. It can be difficult to achieve this if announcements of meetings/deadlines on papers are late. For reasons of logistics (and size of delegation), it may not be possible for every OT to be represented at each ACAP meetings.
2. This problem is particularly acute for Tristan da Cunha, whose views may often need to be represented through other OTs. This will require timely and efficient communication, involving metropolitan UK government, the administration for Tristan da Cunha and the organisations, which undertake work within the island group, especially those located in South Africa. *HIGH priority, low cost*
3. The UK lead Department (Defra) needs to be proactive in ensuring it is aware of all OT issues in time for stakeholder meetings, as well as for ACAP meetings. Following early

difficulties, it is hoped that the two-line approach within UK (Defra leading on administrative/policy issues, JNCC on scientific issues) will be successful. The aim of Defra to facilitate video conferencing for those OTs with the communication capacity was welcomed. *HIGH priority, low cost*

4. The meeting recommended that each OT should be represented at an ACAP meeting at least once in every five-year period. This would assist in gaining comprehensive understanding of all viewpoints relating to OT issues.
5. Future dates of ACAP meetings must include consideration of the travel logistics of all UK OT's.

Overseas territories resources

1. Central government in the UK, especially Defra, should be aware that in most cases the OTs have an acute lack of funds. Particularly in Tristan, those involved in implementation are often making personal sacrifices in trying to meet ACAP objectives.
2. Overseas Territories often have particular difficulties funding long-term projects. On occasions they are reliant on overseas academic bodies sourcing independent research funds. The UK Government should not see such involvement as a substitute for funding directly.
3. At present, throughout the UK OTs, much implementation of ACAP-related work is undertaken by NGOs. Wherever possible UK OT governments help coordinate, facilitate and fund these programmes; this needs recognition in the UK.
4. Defra was not directly represented at the workshop, but is aware of OT concerns. Their initiatives to improve communications mentioned above were welcome and it was hoped that they would play a full part in acquisition of appropriate levels of resource to enable the priority tasks identified by this workshop to be undertaken. *HIGH priority, medium cost*

In order to reflect on the nature and extent of recent and current funding for ACAP-related work it was agreed to compile a summary of such activities, which is attached as Appendix 4. This emphasises the very considerable amount of resources that are already being devoted to ACAP-related work by UK Overseas Territory governments and by NGOs.

Overseas territories project management

As outlined in the introduction to this workshop, an agreed resource-based action plan is needed by all those interested in ensuring that the UK and OT's meet their requirements and obligations to protect albatrosses and petrels.

It was agreed that in order to deliver the objectives of the UK and its OTs in respect of ACAP that the level of communication between OTs and between OTs and the UK (primarily JNCC in this instance) should be improved. It is a common experience of the OTs that personnel based in the UK had more difficulty in understanding local issues than those based in an OT.

It was therefore unanimously agreed that JNCC should employ someone in the OTs to fulfil this co-ordination role. As a JNCC employee they would work directly to JNCC (Mark Tasker) but be located where they were directly involved in OT issues. The Falkland Islands was agreed to be the obvious initial choice for the position.

This would allow immediate access to FIG, GSGSSI, easy access to Ascension and UK and some (albeit) limited access to Tristan da Cunha. It would ensure that the logistical limitations were

factored into planning as well as enabling direct access to the key external parties such as local NGOs and the fishing industry. *HIGH priority £60,000 per annum [initially for 3 years]*

2.8.2 Future meetings

Delegates found the current workshop extremely helpful in developing an OT approach to ACAP implementation as well as linking to relevant colleagues throughout the South Atlantic. It was recommended that another meeting should be held in about three years time. *HIGH priority, £14,000*

3. APPENDIX

3.1 Detailed programme for monitoring status and trends of ACAP species

3.1.1 South Georgia

Wandering albatross

- Maintain annual monitoring of population trends and demography on Bird Island
- Maintain annual monitoring of breeding numbers and success at Albatross and Prion Islands
- Monitor breeding numbers at Annenkov Island every 5 years
- Count all colonies every 10 years
- If monitoring of population trends other than at Bird Island indicates more rapidly declining populations elsewhere, initiate a second long-term demographic study

Black-browed albatross

- Maintain annual monitoring of population trends and demography and count all colonies every 10 years on Bird Island
- Census other representative colonies by photo-survey every 5 years
- If monitoring of population trends indicates more rapidly declining populations elsewhere, census entire archipelago and initiate a second long-term demographic study

Grey-headed albatross

- Maintain annual monitoring of population trends and demography and count all colonies every 10 years on Bird Island
- Census other representative colonies by photo-survey every 5 years
- If monitoring of population trends indicates more rapidly declining populations elsewhere, census entire archipelago and initiate a second long-term demographic study

Light-mantled sooty albatross

- Maintain annual monitoring of population trends and breeding success at Bird Island
- Monitor population size and breeding success annually over stretches of coastline holding min. 50-100 pairs at Husvik, Maiviken and Albatross and Prion Island
- Count all South Georgia colonies to assess overall population size

Northern giant petrel

- Maintain annual monitoring of population trends and demography at Bird Island and count entire island every 10 years
- Monitor breeding numbers and success in a study area annually, and count all breeding birds every 10 years at Albatross and Prion Islands
- If monitoring of population trends indicates that the Albatross and Prion Island populations are declining, census entire South Georgia archipelago and initiate a second long-term demographic study

Southern giant petrel

- Maintain annual monitoring of population trends and demography at Bird Island and count entire island every 10 years
- Monitor breeding numbers and success in a study area annually, and count all breeding birds every 10 years at Albatross and Prion Islands

- If monitoring of population trends indicates that the Albatross and Prion Island populations are declining, census entire South Georgia archipelago and initiate a second long-term demographic study
- Census South Sandwich Island population

White-chinned petrel

- Monitor population trends at several sites every 5 years
- Take advice on demographic monitoring by French, South African and Australian researchers and initiate a full demographic monitoring program, if feasible

3.1.2 Falkland Islands

Black-browed albatross

- Maintain annual monitoring of population trends and demography at New Island
- Initiate demographic study and annual monitoring at Steeple Jason Island
- Census other representative colonies by photo-survey or ground-count annually
- Count all colonies every 10 years

Southern giant petrel

- Census representative colonies by photo-survey or ground-count annually
- Count all colonies every 10 years
- If counts indicate a widespread population decline and behavioural sensitivity of adults can be overcome, initiate full demographic monitoring at Steeple Jason Island

White-chinned petrel

- Count all colonies and assess breeding success annually

3.1.3 Tristan da Cunha and Gough Island

Tristan albatross

- Maintain annual monitoring of population size and demography on Gough Island

Atlantic yellow-nosed albatross

- Maintain annual monitoring of population trends and demography on Gough, Tristan and Nightingale Islands

Sooty albatross

- Census representative colonies annually by ground-count at Gough Island

Southern giant petrel

- Monitor breeding numbers and success annually on Gough

Spectacled petrel

- Monitor population trends every 3-5 years and census entire Inaccessible Island population every 10 years

Grey petrel

- Monitor population trends every 3-5 years, and determine breeding success at Gough Island
- Survey Inaccessible Island for evidence of breeding

3.1.4 British Antarctic Territory

Southern giant petrel

- Initiate annual monitoring of population trends and breeding success in a study area at Signy Island and count entire island every 10 years

3.2 Essential elements for NPOA-Seabirds: Best practice guidelines

FAO Committee of Fisheries
Twenty-sixth Session

Rome, Italy
7-11 March 2005

Introduction

In response to international concern regarding the incidental capture of seabirds in global longline fisheries, in March 1997 the twenty-second session of the Committee of Fisheries (COFI) commissioned an expert consultation to develop guidelines for the development of an FAO International Plan of Action-Seabirds (hereafter IPOA-S). IPOA-S relates to States in the waters of which longline fisheries are being conducted by their own or foreign vessels and to States that conduct longline fisheries on the high seas and in the Exclusive Economic Zones (EEZ) of other States. IPOA-S, finalised in 1999, is a voluntary document that provides the framework for the development of National Plans of Action for Reducing the Incidental Catch of Seabirds (NPOA-S). The key objective to a NPOA-S is to reduce incidental catch of seabirds in longline fisheries, where this occurs. There has been slow progress on the development of NPOA-S with only four plans finalised in six years. (For an update on the status of NPOA-S see Rivera, K. and Cooper, J. 2005. COFI Twenty-Sixth Session: NPOA Overview).

Longline fisheries around the world operate under a wide range of operational and environmental conditions. In this varied environment, IPOA-S could not address specific issues or prescribe national or fishery specific protocols. This document arose from an identified need to summarise the varied approaches and robustness of existing NPOA-S and those currently being drafted in order to provide a template for 'best practice' plans. Adoption of the recommendations contained within the paper would ensure a more uniform implementation of IPOA-S, greatly increase its conservation outcomes, and raise the profile of this FAO initiative.

This document is structured to reflect the guidelines provided in the technical notes of FAO IPOA-S (1999).

Technical note on developing a national plan of action for reducing the incidental catch of seabirds in longline fisheries

Assessment

As stated in IPOA-S, the purpose of an assessment is to determine the extent and nature of a State's incidental catch of seabirds in longline fisheries, where this occurs. The comprehensive list of assessment components provided in IPOA-S form a sound framework on which to base preliminary steps toward identifying the need for a NPOA-S. An assessment should 'determine if a problem exists with respect to incidental catch of seabird. If a problem exists, States should adopt a NPOA-S...'. Given the operational and environmental variability associated with global longline fisheries it is not feasible to define a 'problem' in a general context. For example, seabird assemblages associated with longline fleets vary greatly, for example the diving proficiency of seabirds, and therefore their ability to access baited hooks varies greatly, with many albatrosses reaching depths of several metres and shearwaters being capable of diving in excess of 40m. Therefore, States are responsible for defining what constitutes a problem.

Recommendation: It is important that the criteria used to define what constitutes a ‘problem’ are explicitly and transparently defined. However, many States will lack the time series of data required to determine the impact of their longline fishing effort on seabirds, regardless of their provenance. In most cases however, there will be anecdotal evidence and reports of seabird by-catch. In such cases, the Precautionary Approach¹ should be adopted and a NPOA-S should be prepared to put in place the measures required to both collect the data required to assess a State’s impact on seabirds and where required, mitigate the problem.

NPOA-SEABIRDS

1. Prescription of mitigation measures

‘The NPOA-S should prescribe appropriate mitigation methods. These should have a proven efficiency, and be cost effective for the fishing industry. If effectiveness of mitigation measures can be improved by combining different mitigation measures or devices, it is likely that each State will find it advantageous to implement a number of different measures that reflect the need and particular circumstances of their specific longline fishery’.

The first efforts to develop mitigation measures to reduce the incidental mortality of seabirds in longline fisheries began with the development of tori lines (streamer lines) in the Southern Ocean.² Since the early 1990s, a range of other mitigation measures has been developed in many longline fisheries throughout the world and it has been widely recognised that no single measure is sufficient in isolation and a suite of measures is required to mitigate mortality. The range of measures available are typically either of technical or operational nature³

The measures detailed in IPOA-S are divided into Technical and Operational measures. Since the drafting of IPOA-S, considerable research has been conducted into the effectiveness of various mitigation measures both in isolation and in combination. It is important to note that all measures contained in IPOA-S are not equally effective, in fact recent evidence suggests that several have limited success in reducing seabird by-catch (e.g. water cannon, acoustic deterrent). There is however, a considerable body of evidence that indicates seabird mortality can be reduced to negligible levels with the adoption of a suite of mitigation measures appropriate to a specific longline fishery. Appendix I contains background information on the technical and operational mitigation measures that have been proven to be most effective and a summary of the latest emerging measure in demersal and pelagic fisheries.

Minimum standards

While there are some promising mitigation measures currently under development (see Appendix 1), when used in combination, and with appropriate training, the existing suite of mitigation measures offer the potential to result in a rapid and extensive reduction in mortality. CCAMLR has taken the lead in developing these minimum standards.

¹ As defined in article 6.5 of the Code of Conduct: “ States and sub-regional and regional fisheries management organizations should apply a precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment.”

² Brothers, N. (1991). Albatross mortality and associated bait loss in the Japanese longline fishery in the Southern Ocean. *Biological Conservation* 55: 255-268.

³ Food and Agriculture Organisation (1999). *International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries*. Rome.

Recommendation: All NPOA-S should prescribe minimum standard mitigation measures that consist, at least, of the mandatory adoption of streamer lines and appropriate line weighting for all longline vessels, and assess the adoption of area and seasonal closures.

Mandatory and voluntary measures

The prescription of mandatory measures in NPOA-S is a very effective way of reducing seabird mortality. However, an advantage of voluntary measures over highly prescriptive mandatory measures is that they can provide more scope for innovation, which can lead to improvements in the effectiveness of mitigation measures. A mixture of minimum standard mandatory measures and additional voluntary measures may be the most effective means of applying the NPOA.

Recommendation: Best practice NPOA-S should include the mandatory adoption of minimum standard mitigation measures in conjunction with the voluntary implementation of other measures.

2. Research and development

'The NPOA-S should contain plans for research and development, including those aiming: (i) to develop the most practical and effective seabird deterrent device; (ii) to improve other technologies and practices which reduce the incidental capture of seabirds; and (iii) undertake research to evaluate the effectiveness of mitigation measures in the longline fisheries, where this problem occurs.'

Experimental research is currently underway into several emerging mitigation measures that promise to improve the suite of techniques available to reduce seabird mortality. All research should be conducted keeping in mind that fishers are more likely to employ measures that are low-cost and operationally practicable for their fishery regardless of whether these measures are mandatory or voluntary.

Fishery specific suites of measures

Recommendation: Ideally, NPOA-S should outline the information required to facilitate research into the identification of fishery specific suites of effective mitigation measures. In both demersal and pelagic fisheries it is important that further research is conducted into the effectiveness of mitigation measures in isolation and in combination, and that research and development is continued to refine existing mitigation measures and identify new ones.

3. Education, training and publicity

'The NPOA-S should prescribe means to raise awareness among fishers, fishing associations and other relevant groups about the need to reduce the incidental catch of seabirds in longline fisheries, where this occurs; National and International Plans of Action and other information on the incidental catch of seabirds in longline fisheries; and to promote the implementation of the NPOA-S among national industry, research and its own administration...'

Knowledge exchange and international networks

Regional and international networks of NPOA-S lead to an international application of IPOA-S though shared experience and the exchange of skills and knowledge. There are several international networks that promote seabird friendly fishing techniques, information exchange and provide training for fishers (NGO examples include, BirdLife International, Southern Seabird Solutions, American Bird Conservancy, World Wildlife Fund).

In January 2004, BirdLife International hosted a workshop for fisher and fisheries management organisations in Kaoshiung (Taiwan). This was an important step in engaging East Asian fishers and fisheries management organisation and working toward solutions to reducing seabird by-catch on the large Asian longline fleets. BirdLife International currently has a project proposal to fund an international team of mitigation instructors (Operation Ocean Task Force) to work at the crew level to train fishers and fisheries management agencies, on-shore and at-sea, on the simple measures that can be used to reduce seabird by-catch. Such a programme will advance skills, knowledge and information exchange on an international scale and will be designed to feed into the NPOA process on a regional scale.

The International Fishers Forum is a forum designed to bring together fishers, decision makers and NGOs to identify solutions to reduce incidental by-catch of seabirds and sea turtles. The first two IFF meetings (New Zealand 2000 and Hawaii 2002) resulted in many collaborative mitigation research initiatives, and IFF 3 is currently being planned for Japan. This will provide an excellent opportunity to discuss the content, development and implementation of Asian NPOA-S, which will encompass the regions large distant water longline fleet.

FAO involvement

In 1995 the FAO established 'Fishcode', an Interregional Assistance Programme designed to assist developing countries promote responsible fisheries. 'Fishcode has a range of objectives⁴, one of which is to assist States implement International Plans of Action. At the Twenty-fifth Session of the COFI, several parties expressed concern that a lack of technical assistance and consultation had been partially responsible for the lack of progress of many countries in conducting an assessment and/or drafting a NPOA-S. In light of this and to advance the NPOA-S in South America, which has both significant albatross and petrel populations and longline fleets, the FAO and BirdLife International jointly convened a workshop in Valdivia, Chile in December 2004 to advance the NPOA-S process⁵. Fishcode is an appropriate vehicle through which the FAO can provide further technical consultation for the many countries yet to engage in the IPOA-S process. The Valdivia workshop provides a good regional model on which to base such consultations.

Recommendation: NPOA-S should encourage skills and knowledge transfer and data exchange by maximising and building on existing networks. Plans should also ideally contain an element of both on-shore and at-sea training by practitioners experienced in the use of mitigation measures. Training programmes should be designed to deliver information to fishermen in a manner that instils the skills and competence to transfer this information to others in their industry, thereby creating a long-term legacy. All educational material and outreach programmes should be produced in conjunction with a thorough strategy for dissemination of material to the target audience (local, regional and international).

(Appendix II contains a list of printed and video resources available that provide information on the mitigation measures available to reduce seabird by-catch).

4. Data collection

'Data collection programmes should collect reliable data to determine the incidental catch of seabirds in longline fisheries and the effectiveness of mitigation measures. Such programmes may make use of onboard observers'.

FAO Committee of Fisheries Twenty-sixth Session Rome, Italy, 7-11 March 2005, Progress in the implementation of the Code of Conduct for Responsible Fisheries and Related International Plans of Action, Fishcode Programme 59-62, pg 10-11.

⁵ http://www.fao.org/icatalog/search/dett.asp?aries_id=105453&ch_lang=en

Observer coverage

Onboard observer programmes are a critical component to the success of any programme that aims to reduce seabird by-catch. Unfortunately, for many fisheries observer coverage is inadequate.

It has repeatedly shown that by-catch of non-target species (e.g. seabirds, sea turtles) is not accurately recorded by fishers. In addition, the onboard presence of fisheries observers specifically tasked to collect biological data for stock assessment and other fisheries management objectives, does not guarantee that seabird mortality will either be observed or recorded in a systematic manner.

Recommendation: Observer programmes should be designed and implemented to provide independent and representative data that is transparent and accessible and collected by personnel specifically trained and tasked to monitor and record seabird by-catch (and the by-catch of other taxa) and advise and educate fishers on the correct deployment of mitigation measures. In addition, the return of seabird carcasses to check identification and further analysis is an essential part of any programme.

Recommendation: An appropriate level of specifically tasked observer coverage is essential to record seabird by-catch and in some cases, to monitor compliance with mitigation measure prescriptions. The level of seabird observer coverage should be determined by the need to derive a robust estimate of seabird mortality. In many cases, it is not feasible to have a seabird and a fisheries observer onboard. In such cases, the proportion of time that an observer is directly engaged in conducting seabird related observations should be explicitly and transparently detailed in data collection protocols. However, some observer programmes use paired observers to assist with observing 24-hour operation with large vessels.

In recent years, electronic monitoring has advanced to the point where video technology has been successfully applied in a range of fisheries (e.g. longline, trawl, potting) to monitor target species catch rates and is developing for non-target species by-catch, including seabirds.⁶ Future NPOA-S could consider the suitability of trialling such technology.

Provision of data

IPOA-S suggests that states should cooperate with regional fisheries bodies to reduce seabird by-catch.⁷

Recommendation: The NPOA-S process provides an opportunity to facilitate the provision of seabird by-catch data to regional fisheries management bodies, where it should be openly available at the finest possible resolution feasible.

Additional recommendations (not explicitly contained in IPOA-S):

By-catch objectives

There are two primary methods for establishing by-catch goals: a by-catch rate, typically expressed in seabirds killed per thousand hooks; and either a species specific, or a generic absolute number. Typically, seabird by-catch figures are reported as the number of birds killed per thousand hooks. While this is appropriate for interpretation as it relates seabird mortality to fishing effort in manner that is both transparent and meaningful to fisheries management authorities, there can be flaws in

⁶ E.g. Archipelago Marine Research Ltd., www.archipelago.ca

⁷ Implementation (19) States, within the framework of their respective competencies and consistent with international law, should strive to cooperate through regional and subregional fisheries organisations or arrangements, and other forms of cooperation, to reduce the incidental catch of seabirds in longline fisheries

this methodology when setting by-catch goals. By-catch goals based on a mortality rate can be ineffective if a reduction in by-catch is offset by an increase in fishing effort causing an actual increase in the overall level of mortality.

Recommendation: A critical component of all NPOA-S is the inclusion of by-catch reduction goal (targets). Cognisant with the prescription of mitigation measures to reduce seabird mortality, stringent, but attainable by-catch goals should be established. The rationale and methodology for calculating such goals should be both transparent and scientifically justifiable. If by-catch rates (e.g. kills per thousand hooks) are utilised, they should be set on the understanding that if fishing effort increases the rate will be adjusted to ensure an actual reduction in the number of seabirds killed.

Timelines

Recommendation: Best practice NPOA-S should include timelines associated with all objectives and goals (e.g. by-catch objectives, level of observer coverage). Such time lines are essential as they provide measurable criteria by which to assess the success of a plan meeting its stated goals and objectives.

Monitoring and reporting

IPOA-S requires States to conduct a four-yearly assessment/review of NPOA-S' for the purpose of identifying cost-effective strategies for increasing the effectiveness of NPOA-S'.

Recommendation: It is critical that NPOA-S establish a formal reporting/management structure that assigns or accepts responsibility for the on going monitoring of the implementation, evolution and review of national plans.

Impact assessment

IPOA-S requires 'States which determine that an NPOA-S is not necessary should review the decision on a regular basis, particularly taking into account changes in their fisheries, such as the expansion of existing fisheries and/or the development of new longline fisheries.'

Recommendation: An essential component of all NPOA-S (not just assessment reviews) should be a comprehensive assessment of the risks to seabirds of the expansion of existing fisheries and/or the development of new longline fisheries.

Scope of NPOA-S (other fisheries)

The intent of the International Plan of Action-Seabirds (IPOA-S) is based upon framework of the Code of Conduct for Responsible Fisheries to reduce the incidental catch of seabirds in longline fisheries, where this occurs.

Recommendation: In the absence of similar policies addressing other fisheries (e.g. trawl and gillnet fisheries), and in light of recent findings in the Falkland Islands/Malvinas, New Zealand and South Africa, where evidence suggest that seabird mortality in trawl fisheries may exceed that recorded in some longline fisheries, where appropriate, States should use the NPOA-S process to address (e.g. Falkland Islands/Malvinas and New Zealand) by-catch issues in other fisheries.

Conclusion

BirdLife has been directly involved in the drafting of NPOA-S for Brazil, Chile, Falkland Islands/Malvinas, New Zealand, South Africa and Taiwan (non-FAO member). This has given us considerable experience and knowledge of both the consultation process and implementation of plans. NPOA-S provides a vehicle for reducing seabird by-catch through the provision of a cyclical

framework of data collection and research to quantify and reduce (mitigate) seabird by-catch. The plans also provide an opportunity for the creation of collaborative networks and initiatives between the fishing industry, governments and NGOs, which can have on-going benefits beyond the practical implementation of plans.

BirdLife have identified the following essential elements as the overarching minimum standards for the development of best practice NPOA-S:

- A thorough assessment should be conducted based on the guidelines provided in IPOA-S and the criteria used to justify the need for a NPOA-S (or not) should be explicitly detailed.
- Where feasible, NPOA-S objectives should be coupled with stringent but realistic targets and timelines (e.g. by-catch goals, level of observer coverage).
- Data collection and methodological protocols associated with NPOA-S initiatives should be transparent and scientifically justifiable.
- Seabird by-catch data and where appropriate, mitigation measure compliance information, should be collected by ensuring an appropriate level of specifically tasked seabird observer coverage.
- All plans should require the adoption of minimum standard mitigation measures (e.g. bird scaring lines, line weighting, seasonal measures).
- Plans should include a combination of mandatory (minimum standard mitigation measures) and voluntary additional mitigation measures for all longline fisheries addressed in a NPOA-S.
- States should optimise the NPOA-S opportunity by addressing seabird by-catch issues in other fisheries (e.g. trawl and gillnet fisheries) as exemplified by the Falkland/Malvinas and New Zealand NPOA-S.

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Appendix I

Background review of minimum standard and emerging mitigation measures

Key mitigation measures: technical

Bird scaring lines

Bird scaring lines (streamer lines) have undergone considerable evolution since their inception in the early 1990s, but the strength of the measure remains in its simplicity and effectiveness. Streamer lines are the primary and most commonly prescribed mitigation measure in longline fisheries worldwide.⁸ In Norway, single streamer lines have been shown to be 98-100% effective at reducing the mortality of Northern Fulmars (*Fulmarus glacialis*), which are predominantly surface feeders.⁹ In several fisheries in recent years the single streamer line has been replaced by paired streamer lines (set either side of the mainline). Experimental testing of paired streamer lines in the Alaskan longline fishery, which attract three *Phoebastria* albatrosses, has shown that they can reduce mortality by between 88% and 100%,¹⁰ these data were a primary driver in changes made to CCAMLR CM 25-02 to recommend that all longline vessels deploy twin streamer lines.⁸

Recent research in the Falklands/Malvinas suggests that streamer lines are also effective at reducing seabird mortality caused by warp strikes on stern trawlers.

If all longline vessels deployed streamer lines the problem of seabird by-catch would be significantly reduced immediately.

Line weighting

Ideally, longlines should start to sink the instant they enter the water. The risk to seabirds is greatly increased by longlines that sink too slowly. Due to propeller wash and wave action unweighted demersal lines often float on the surface for up to 50m astern of the vessel before they start sinking. Traditionally, in demersal longline fisheries, particularly Spanish System vessels (double line system used only in the Southern Ocean), but also using the Mustad autoline system, external weights are added to the line at prescribed distances.¹¹ This can require considerable effort on behalf of fishers, creates a staged sink profile due to unequal distribution of weight and creates a compliance issue (i.e. how to ensure the weights are added at the correct distance). However, in all cases it has been shown to greatly reduce seabird mortality. Considerably more work is required to identify the optimum-weighting regime for pelagic longlines. However, weighted swivels added to the snood have been shown to significantly increase the sink rate of pelagic longlines.

If all longline vessels deployed streamer lines in combination with appropriate line weighting the problem of seabird by-catch would most likely be reduced to relatively low levels.

Setting chute

A setting chute is a device that is attached to the stern of vessels to deliver baited hooks under water. The chutes consists of a tube, which allows hooks and buoys to travel down and exit

⁸ Melvin, E., Sullivan, B. J., Robertson, G. and Wienecke, B (in press) A review of the effectiveness of streamer lines as a seabird by-catch mitigation technique in longline fisheries and CCAMLR streamer line requirements. *CCAMLR Science*.

⁹ Løkkeborg, S. and Robertson, G. (2002). Seabird and longline interactions: effects of a bird-scarer streamer line and line shooter on the incidental capture of northern fulmars *Fulmarus glacialis*. *Biological Conservation* 106: 359-364.

¹⁰ Melvin, E. F. (2003). Streamer lines to reduce seabird by-catch in longline fisheries. Washington Sea Grant Program WSG-AS 00-33.

¹¹ Agnew, D. J., Black, A. D., Croxall, J. P. and Parkes, G. B. (2000). Experimental evaluation of the effectiveness of weighting regimes in reducing seabird by-catch in the longline toothfish fishery around South Georgia. *CCAMLR Science* 7: 119-131.

underwater, or has a slot in the side for the external deployment of buoys and weights etc. The device is attached at a fixed angle to the stern of the vessel, and releases the hook approximately 1.5 m below the surface of calm sea. Tests on the effectiveness of chutes have had mixed results, but in combination with streamer lines it has been demonstrated to significantly reduce seabird mortality.^{12,13} However, in Norway it was not as effective at reducing Northern fulmar mortality as a streamer line in isolation.^{12,14} All studies conducted to date highlight the need for structural improvements to increase the depth at which the line is set, and thus reduce the propensity for the chute (and line) to be positioned above the water's surface when the vessel is front heavy (due to fuel and/or cargo load) or as the vessel pitches in rough seas.^{15,12,13} It has been suggested that a gimballed attachment would be less affected by the angle of the stern of the vessel and would therefore deliver hooks at a greater depth.¹⁵ The capital investment of setting chutes is also considerable compared with streamer lines.

Key mitigation measures: operational

Night setting

One of the most effective mitigation measures to reduce albatross mortality on longlines is to restrict line setting to the hours of darkness. While this does seasonally restrict the opportunity for setting operations in high latitude areas it has been shown to reduce seabird by-catch, particularly albatrosses, in both pelagic and demersal longline fisheries^{16,17}. However, this is not effective for all seabird species, e.g. white-chinned petrels which forage actively at night have been killed in similar numbers during day and night setting.^{17,18}

Emerging techniques

Demersal

The most promising mitigation development in recent years is Integrated Weight (IW) line for autoliners (single line configuration), which consists of a mainline with beads of lead woven into the fabric of the line. The results of experimental trials conducted in 2002 on IW line in the New Zealand ling fishery, which attracts a large diversity and density of albatrosses and petrels, (up to 1,200 seabirds per set) are extremely promising. After 16 days of fishing and 400,000 hooks, sets conducted with the IW line killed only one bird compared to 82 on the unweighted line.¹⁹ Subsequent trials in 2003 had similarly successful results. During both sets of trials over 70,000 hooks were set and not a single albatross and very few petrels were caught (G. Robertson, *pers. comm.*). This method appears particularly promising as fish catches are not affected and fishers like

¹² Løkkeborg, S. (1998) Seabird by-catch and bait loss in long-lining using different setting methods *ICES Journal of Marine Science* 55: 145-149.

¹³ Ryan, P. and Watkins, B. (2002). Reducing incidental mortality of seabirds with an underwater longline setting funnel. *Biological Conservation* 104: 127-131.

¹⁴ Løkkeborg, S. (2003). Review and evaluation of three mitigation measures-bird scaring line, underwater setting and line shooter-to reduce seabird by-catch in the northern Atlantic longline fishery. *Fisheries Research* 60: 11-16.

¹⁵ Brothers, N. P., Cooper, J. and Løkkeborg, S. (1999a). The incidental catch of seabirds by longline fisheries: worldwide review and technical guidelines for mitigation. FAO Fisheries Circular No. 937. Food and Agriculture Organization of the United Nations.

¹⁶ Klaer, N. and Polacheck, T. (1998). The influence of environmental factors and mitigation measures on by-catch rates of seabirds by Japanese longline fishing vessels in the Australian region. *Emu* 98: 305-316.

¹⁷ Nel, D. C., Ryan, P. and Watkins, B. P. (2002). Seabird mortality in the Patagonian toothfish longline fishery around the Prince Edward Islands, 1996-2000. *Antarctic Science*. 14: 151-161.

¹⁸ Cherel, Y., Weimerskirch, H. and Duhamel, G. (1996). Interactions between longline vessels and seabirds in Kerguelen Waters and a method to reduce seabird mortality. *Biological Conservation* 75: 63-70.

¹⁹ Robertson (2003). Fast-sinking lines reduce seabird mortality in longline fisheries. Australian Antarctic Division, Tasmania. (http://www.aad.gov.au/MediaLibrary/asset/MediaItems/ml_378866892476852_fast-sinking.pdf)

using the line as it removes the need to clip on weights and is easier to coil and handle than the traditional line (G. Robertson *pers. comm.*).

Pelagic

The development in New Zealand of an underwater setting capsule for pelagic longliners that sets baited hooks 10 metres underwater is currently undergoing extensive trials in New Zealand and Australia.

Case study in seabird by-catch reduction

South Georgia (CCAMLR)

Arguably, the best example of managing seabird by-catch by adopting a suite of mitigation measures is exemplified by the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR).

Seabird mortality in the legal fishery around South Georgia (CCAMLR Sub-area 48.3) has been reduced to negligible levels. This has been achieved largely by the development of a specialist group tasked with identifying an appropriate suite of measures to mitigate seabird mortality. In 1993, CCAMLR established the *ad hoc* Working Group on Incidental Mortality Arising from Longline Fishing (WG-IMALF, currently WG-IMAF). This group solicits and reviews research and information on best practice mitigation measures and advises the Scientific Committee and Commission of CCAMLR on the most appropriate measures to reduce seabird mortality. A suite of mitigation measures to reduce incidental mortality is then enacted through a legally binding Conservation Measure (CM) (currently, CM 25/02). These measures include a combination of the mandatory use of streamer lines, prescriptive line weight regimes and night setting (restriction of all line setting to the hours between nautical dusk and nautical dawn). The promulgation of a seasonal closure in the albatross-breeding season (1st September and 30th April, CCAMLR 2000) (currently CM 32-01) serves to both minimise seabird mortality and also protect fish stocks. As a result of the combination of Conservation Measures introduced in recent years incidental mortality has been reduced to negligible levels in South Georgia (Sub-area 48.3) where levels have been reduced from 0.66/1000 hooks in 1993²⁰ to 0.0003 per 1000 hooks in 2003, which represents an estimated annual by-catch of only eight birds.²¹

²⁰ SC-CAMLR. XII (1993). Report of the 12th Meeting of the Scientific Committee. CCAMLR, Hobart.

²¹ SC-CAMLR-XXII (2003). Report of the 22nd Meeting of the Scientific Committee. CCAMLR, Hobart.

Appendix II

Video and printed resources on reducing seabird by-catch

NB: This is not a complete list of resources, but rather an example of what is available in various regions of the world.

Video resources

Australian Fisheries Management Authority – Catch Fish Not Birds (<http://www.afma.gov.au/>)

Projeto Albatroz – Trabalhadores do Mar (<http://www.projetoalbatroz.com.br/mainpg.htm>)

Royal Society for the Protection of Birds (BirdLife International) – Save the Albatross: keeping seabirds off the hook (<http://www.rspb.org.uk/>)

Southern Seabird Solutions – Fishing the Seabird Friendly Way (<http://www.doc.govt.nz/Conservation/001~Plants-and-Animals/004~Seabirds/001~Southern-Seabird-Solutions/index.asp>)

Washington Sea Grant – Off The Hook (<http://www.wsg.washington.edu/>)

Printed resources

Organisation for the Responsible Promotion of Responsible Tuna Fisheries (OPRT) - *Tuna Longlining Fishing: Meets the Challenge* (<http://www.oprt.or.jp>)

Commission for the Conservation of Southern Bluefin Tuna (CCSBT) Building a Seabird Friendly Southern Bluefin Tuna Fishery (<http://www.ccsbt.org/>)

Argentinas, Universidad Nacional de la Patagonia Austral and Argenova S.A. - *Evitemos la pérdida de carnada y la muerte de aves marinas.* (<http://www.avesargentinas.org.ar/aa/index.html>)

BirdLife International - *Save the Albatross: keeping Seabirds Off the Hook* (<http://www.birdlife.net/>)

American Bird Conservancy – *Sudden Death on the High Seas* (<http://www.abcbirds.org/>)

Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) – *Fish the Sea, Not the Sky* (<http://www.ccamlr.org/>)

Washington Sea Grant – *Streamer Lines to Reduce Seabird By-catch in Longline Fisheries* (<http://www.wsg.washington.edu/>)

3.3 Operation Ocean Task Force

Introduction

Many programmes around the world place observers on vessels to monitor and record seabird by-catch. However, there is a real shortage of qualified at-sea practitioners to help and train fishers in the selection and use of appropriate mitigation measures. Currently, mitigation research is being conducted by a handful of individuals working independently, and no coordinated team of specifically tasked practitioners exists.

Operation Ocean Task Force will establish a much-needed team of mitigation instructors to work on ‘grass roots’ projects with fishers on-shore and at-sea. The Instructors will conduct workshops and fishing trips to train fisheries managers and fishers on the need for, effectiveness of, and ease of adopting a range of ‘best practice’ mitigation measures that - once deployed - rapidly reduce seabird mortality levels. Where practicable, instructors will also conduct at-sea trials to help in the research and development of new technology and to refine the application of existing measures.

Project structure

Fisheries to be targeted by the task force fall into two broad categories based on their management structures, vessel characteristics, industry incentives, level of observer coverage and by-catch data availability. This division helps to determine fishery-based project objectives. It recognises that both between and within country the objectives of the task force will be largely determined by the nature of the fishery being targeted. Thus, the task force will work with two broad types of fishery

Type I - typically occur in countries with large diverse fleets (including artisanal fisheries)

- considerable known or potential overlap between seabirds and fishing effort
- limited awareness of seabird conservation issues
- initial by-catch estimates lacking [or limited/anecdotal by-catch data]
- limited industry incentives and structures

Type II – typically in countries characterised by fleets of large vessels (factory fleets)

- By-catch estimates available [observer programmes in place]
- In-country capacity to collect by-catch data and promulgate mitigation measure
- Industry incentives in place [mitigation measures]

Striking the correct balance between on-shore and at-sea training will be key to the success of the task force. In some cases [typically Type I fisheries], considerable time and effort will need to be spent creating links at various levels of industry: managers, vessel managers, captains and crew. Depending on the nature of the fishery and industry incentive structures in-place the approach will vary on several levels: between country, within country, and between fishery. [Within each fishery it is important to recognise that each vessel and crew are unique and where possible each combination should be profiled and the appropriate mitigation measures and strategy developed].

Project objectives

The framework of the task force comprises five general principles, within a clearly defined conservation goal as the primary objective:

To reduce by-catch of albatross and petrels in targeted fisheries, and ultimately to improve the conservation status of threatened seabirds.

The following secondary objectives are interrelated and synergies between them will be critical to meeting the primary conservation objective of the project.

Awareness - increased awareness in the fishing industry and community of seabird/fisheries conservation issues

Branding - profile for collaborators, government and funding bodies

Capacity - provide medium to long-term support for collaborators and establish/strengthen relationships between BirdLife and other organisations

Funding – identify and secure resources for the long-term life of the project

Strategic [political]-secure government support, promote and provide capacity for policy initiatives such as NPOA-S.

Placement of task force effort

The initial concept of the task force was to target countries with the following characteristics: (1) limited capacity for such programmes; (2) some degree of BirdLife or collaborator advocacy or outreach; (3) Exclusive Economic Zones (EEZs) supporting significant numbers of threatened albatross species (relevant to FAO National Plans of Action and ACAP) and longline [and other] fisheries. The October workshop [in Hobart] discussed several options to focus effort, including placing instructors in countries to target by-catch of seabirds of known [or presumed] provenance. Thus placing effort in Argentina, Brazil, southern Africa and Uruguay would enable the task force to focus on reducing seabird by-catch of birds from South Georgia. The workshop participants recognised the value in working towards by-catch reduction that in the long-term could be measurable in population changes at breeding colonies. But it was also considered it important to focus effort where there was the most immediate need and adequate support structures [in industry and with in-country collaborators] to give tangible results. One of the key outputs of the workshop was a matrix to identify priority countries based on a range of criteria. These included:

- fisheries capacity [level of receptiveness to engage on the issue],
- collaborator capacity [capacity to support and assist task force members and deliver outcomes]
- size and nature of the domestic and distant water fleet operating in EEZ
- government support [level of support within upper level of government]
- political timing [current opportunities for leverage]
- availability of baseline by-catch data

To secure long-term funding for the project, workshop participants agreed that the project should be implemented in a staged process, with the first 18 months of the project being focused in countries with a high level of threat to seabirds [longlines, trawling, gillnetting], and where we have the in-country support and industry structures to achieve relatively ‘quick-wins’. The three countries identified as being key targets in Phase I of the project are Brazil, Chile and South Africa. During the first year of the project we will identify which countries would be suitable targets for effort in Phase II [the second 18 months]. Potential countries include, but are not limited to: Argentina, Namibia, Peru, Uruguay.

The value and success of Operation Ocean Task Force will be measured in the translation of effort into practical conservation success. With the support money raised at the RSPB Save the Albatross

Gala Dinner in April 2005, and on-going donations made after the dinner, the RSPB has guaranteed to fund OOTF for £100,000 each year, for the next three years [2006-2008]. In first implementation stage we aim to have 2-3 people employed by March 2006, working toward a full quota [under the current available funds] of 6-8 people in the task force by the end of 2006. If the project is successful, additional funds will be sought for its expansion. We hope it may by then have attracted the attention and support of relevant governments.

Relationships between collaborators

The success of the programme will depend on strengthening relationships and providing support for BirdLife partners, and working closely with other organisations. The nature of such arrangements may vary between MoUs and more informal, morally binding agreements. However, to ensure that all parties are clear on expectations associated with the project, in every case there will be clear targets and timelines associated with all arrangements.

Long-term project legacy

It is critical that we are able to objectively assess the success of the project in reaching its primary conservation objective. To do so, we must develop a range of performance indicators. The deliverables for each country [and fishery] will be a different combination of awareness, capacity building, observer-based by-catch data and the uptake of mitigation measures. The management structure of the project should be developed to enable the in-country collaborators to work with project management to develop indicators that reflect aims for the fisheries in a pre-determined time period [e.g. 18 months], in terms of seabird by-catch.

Some successes are obviously more tangible than others and the deliverables from each country will be largely determined by the incentives already in place. For example, in some cases the initial projective objective will be to raise awareness of the conservation issues and the need for mitigation [Type I fisheries], and in other fisheries [Type II] indicators such as the level of adoption of mitigation measures will serve as a more direct measure of success.

- Some indicative indicators discussed at the workshop included;
- Number of on-shore workshops and number of attendees
- Level of instructor coverage at-sea
- Development and dissemination of training materials
- Dissemination of mitigation measures
- Establishment of a centralised database for collation and analysis of the task force's success in reducing by-catch
- Voluntary uptake of mitigation measures
- Industry incentive structures in place [reflected in fisheries regulations]

To be successful OOTF must leave a conservation legacy beyond the life of the project. Ideally, this should include securing funding for at least a proportion of the project in selected countries without injection of external [BirdLife] funds. Although it is difficult to ascertain the direct cause of seabird population recoveries, in the long-term, reductions in seabird mortality achieved by the task force should be reflected in decreased population declines and/or population recovery.

Selection and training of instructors

The workshop participants recognised that the success of the project relied heavily on the recruitment of the correct people. The key character attributes required of the instructors include:

- Local people with language skills and respect of industry
- Confident, knowledgeable and sympathetic in dealings with fishermen
- Understanding of fisheries practices, culture, and the need for mitigation measures
- Hardworking and able to gain respect

It was recognised that once recruited the instructors would need some level of training from their in-country host, and that to make the most efficient use of resources, once sufficient instructors were employed a training workshop(s) for all instructors would be conducted by international mitigation experts.

The workshop participants strongly supported the notion of identifying industry 'leaders' who had the skills and knowledge to champion mitigation measures across fleets, and in so doing so, give them a level of credibility and acceptance that is difficult for outsiders to achieve. It was recognised that there was a lack of international equivalents to industry leaders such as Malcolm McNeil (Sealord, New Zealand) and John Bennett (Sanfords, New Zealand), who are able to advocate for change from within the industry at the middle [vessel managers] and top [company managers] levels. However, the task force should maximise opportunities to utilise the skills of existing industry leaders and encourage and support the development of others.

For further details contact:

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Royal Society for the Protection of Birds,
The Lodge, Sandy, Bedfordshire, SG19 2DL, UK.
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3.4 Summary and costs for recent and current ACAP-related projects

Organisation	Project detail	Timeframe	Location	Costs	Comments
Falklands Conservation	<p>Survey – Island wide census undertaken for: Black-browed albatross, White-chinned petrel and Southern giant petrel</p>	<p>1995, 2000, 2005 2005 2005</p>	Falkland Islands	£47,500 5 yearly	Boat hire, travel, provisions, equipment, salary contribution
	<p>Monitoring – Surveys at key sites by photographic or direct count methods for: Black-browed albatross Southern giant petrels White-chinned petrels Demographic study of black-browed albatross</p>	<p>2006 – 2006 – 2006 – 2006 -</p>	Falkland Islands	£27,000 per year	Travel, production costs, equipment and contribution to salary
	<p>Research – Satellite tracking of black-browed albatross at Saunders Island and Beauchene Island Colour marking studies of black-browed albatross juveniles from Steeple Jason Island</p>	<p>2000 – 2003 2003</p>	Falkland Islands	£85,000	Includes satellite tags, download costs, provisions, report costs, travel, provisions and contribution to salary

	<p>Education and awareness – Production of video, posters and leaflets for fishers Reports, articles and media information and publications for the local community, visitors and military Education programme in schools producing teacher’s kits and student projects integrated into the curriculum WATCH nature club trips to albatross colonies</p>	<p>2000 -</p>	<p>Falkland Islands</p>	<p>£33,500</p>	<p>Materials, production costs, travel expenses and contribution to salary</p>
	<p>Fisheries related – At-sea surveys Development of and continuation of mitigation measures for trawl fisheries Progression of waste discard management Jigging Initiative, observation and investigation of seabird impact from jigging fleet</p>	<p>1996 – 1999 2001 – 2004 –2006 2004 - 2006</p>	<p>Falkland Islands</p>	<p>£350,000</p>	<p>Costs over three years for at-sea surveys plus observer salary and equipment costs over subsequent six years</p>
<p>BirdLife International</p>	<p>RFMO – engaging with RFMO particularly the top 5 identified as critical for seabirds (Small 2005) Strengthening by-catch resolutions, increasing adoption of mitigation measures and implementation of international policy framework (e.g. UNFSA, IPOA-S, CCRF)</p>	<p>2004 -</p>	<p>International, focussed in Southern Ocean</p>	<p>£45,000 per year</p>	
	<p>Albatross Task Force – establishing an international team of instructors in by-catch ‘hot spots’ to demonstrate effective adoption of mitigation measures, strengthen and establish industry links and support BirdLife partners/collaborators</p>	<p>2006 -</p>	<p>South Africa, Brazil, Chile (Phase I) Peru, Uruguay, Namibia (Phase II)</p>	<p>£100,000 per year</p>	

	<p>Marine IBA – develop criteria for marine IBAs, integrate with terrestrial programme, links with relevant international initiatives</p> <p>South Africa Responsible Fisheries Programme – (joint project with WWF SA) reducing by-catch of seabirds, marine turtles and sharks in longline and trawl fisheries. Linked with GEF funded Benguela Current Large Marine Ecosystem Project</p> <p>East Asia – support advocacy with DWF and extend BirdLife 2004 Kaoshiung workshop model to South Korea and Japan in 2006</p> <p>Global Seabird Programme Coordination</p>	2005 -	Spain, Portugal, New Zealand and wider Europe	£10,000 per year	
		2004 - 2007	Southern Africa (South Africa, Namibia and expanding into Angola)	£10,000 per year	
		2004 - 2007	Project based at BirdLife Secretariat, Tokyo	£10,000 per year	
		2004 -	Personnel based at the RSPB and BirdLife Secretariat and South American Coordinator	£60,000 per year	
British Survey	Albatross and Giant Petrel Monitoring Programme	Annual	Bird Island, South Georgia	£200,000 per year	Salary and proportional base running costs
	Tracking of wandering albatross	2004 - 2007	Bird Island, South Georgia	£30,000 per year	Loggers, transmitters and ARGOS fixes
	Tracking of giant petrels	2005 - 2006	Bird Island, South Georgia	£30,000 per year	Loggers, transmitters and ARGOS fixes
	Analyses and provision of data to ACAP	2005 - 2006	BAS, Cambridge, UK	0.2 person years	

GSGSSI	At-sea Fisheries Observers	On-going	South Georgia	£450,000 per year	ACAP work is included in a wider project and costs are shared
	Fisheries Patrolling	On-going	South Georgia	£1,900,000	ACAP work is included in a wider project and costs are shared
	Fisheries At-sea Research	On-going	South Georgia	£250,000	ACAP work is included in a wider project and costs are shared
	Tourism Management	2006	Prion Island, South Georgia	£100,000	ACAP work is included in a wider project and costs are shared
	Revision of Management Plan	2006	South Georgia	£55,000	ACAP work is included in a wider project and costs are shared
	South Georgia Surveys	South Georgia Albatross Survey 2003-04	2003 - 2004	South Georgia	£50,000
				£10,000	Cash contributions from the organising party, South Georgia Surveys
				£50,000	Contributions in kind received from Australian Antarctic Division, British Antarctic Survey, totalling an estimated £50,000
South Georgia ACAP Petrel Survey 2005-07		2005 - 2007	South Georgia	£156,000	Research grant to be supplied by the FCO and GSGSSI
			£4,000	Cash contributions 2005 from the organising party, South Georgia Surveys	
			£50,000	Contributions in kind to be received from British Antarctic Survey	

GSGSSI / Polar Seaview / Falklands Conservation	Icefish Mitigation Device Development	2004 - 2005	South Georgia	£44,000	Donations split equally from GSGSSI and Polar Seaview toward a project run through FC
Falkland Islands Government	FIFD Longliner seabird observer programme	2004 -	Falkland Islands and international waters	£44,800 per year	2 person year spending 80% of their time on seabird work on longliners
	FIFD Scientific Fisheries observer programme	2004 -	Falkland Islands and international waters	£9,800 per year	7 person year spending 5% of their time carrying out seabird work on trawlers
	Grant for Falklands Conservation's Offal Management Report	2004 -	Falkland Islands	£5,000 per year	Contribution to a desk top study on discard management
	Contribution to Falkland Conservation's Albatross and Petrel Programme	2004 - 2006	Falkland Islands	£70,800	Provided via the Environmental Planning Office
New Island South Conservation Trust	Albatross Monitoring Programme – population counts, monitoring of adult survival and breeding success, monitoring of diet, Continued development of new survey methodologies, including aerial counts at other selected sites for comparative studies	2003 – Annual	New Island, Falkland Islands	£8,000 per year £5,000 per year	Contribution in kind, of salary of one researcher (ca £3,000 year) presently financed by Foundation for Scientific Research - Portugal
Royal Society for the Protection of Birds/University of Cape Town/Tristan da Cunha Natural Resources Department	Assessment of the conservation status of spectacled petrel - (census, observer work in Brazil, genetic analysis of provenance of birds attending longlines	2004 – 2006	Tristan da Cunha, Brazilian EEZ	£21,000 total	OTEP grant
	The impacts of introduced house mice on the seabirds of Gough Island (PhD)	2003 – 2006	Tristan da Cunha	£20,000 per year	RSPB funded
	Development of long-term seabird monitoring manuals for Gough, Inaccessible and Tristan Islands	2001 - 2006	Tristan da Cunha		Funded along side OTEP, FCO and Darwin projects

	Production of Biodiversity Action Plan for Tristan da Cunha	2003 – 2006	Tristan da Cunha	£200,000 in total	Darwin project
	An assessment of the feasibility of reducing the impact of rodents on Tristan da Cunha and Gough Islands - expert assessment of eradication feasibility, stakeholder workshops, research into the rats at Tristan	2005 – 2007	Tristan da Cunha	£68,000 in total	OTEP grant
	Remote tracking of Gough Island seabirds	2001 – 2006	Gough Island, Tristan da Cunha, international waters, EEZ of Tristan and other nations	ca. £10,000 in total	Partly funded via #64, partly by RSPB, partly by British Ecological Society
	Census and monitoring activities for ACAP species on Gough - during course of fieldwork programmes above	2000 -	Gough Island, Tristan da Cunha		via fieldwork presence for other funded projects
	Initial assessment of the conservation status of Gough Island seabirds	2000 – 2003	Gough Island, Tristan da Cunha	£40,000 in total	FCO grant
	Long-term demographic studies of Tristan albatross and Atlantic yellow-nosed albatross on Gough Island	1980's -	Gough Island, Tristan da Cunha		Via fieldwork presence for other funded projects, and weather station volunteers

4. Annexes

4.1 Contact details

4.1.1 List of contact addresses for workshop attendees

Organisation	Name	Contact information
Agreement on the Conservation for Albatross and Petrels (ACAP)	Mr. Barry Baker	ACAP Secretariat, GPO Box 824, Hobart, Tasmania, Australia 7001. Tel: +61 3 6233 3719 Email: barry.baker@acap.aq www.acap.aq
	Dr. Helen Riley	15 2F2 Royal Park Terrace, Edinburgh, Scotland, EH8 8JB Email: helentriley@aol.com
Ascension Island Government	Mr. Stedson Stroud MBE	Assistant Conservation Officer, George Town, Ascension Island, South Atlantic ASCN 1ZZ Tel: +247 6359 Email: boxwood.stedson@atlantis.co.ac
BirdLife International	Prof. John Croxall CBE, FRS	(up to 19 January 2006) British Antarctic Survey, Natural Environment Research Council, High Cross, Madingley Road, Cambridge CB3 0ET, UK. (from 19 January 2006) Chair, Global Seabird Programme, BirdLife International Wellbrook Court, Girton Road, Cambridge, CB3 0NA, UK. Tel: +44 1223 277318; Fax: +44 1223 277200 Email: john.croxall@birdlife.org

	Dr. Ben Sullivan	Coordinator, Global Seabird Programme, UK Headquarters RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK. Tel: +44 1767 680 551; Fax: +44 1767 692 365 Email: Ben.Sullivan@rspb.org.uk
BirdLife South Africa	Ms. Samantha Petersen	BirdLife/WWF Responsible, Fisheries Programme Manager, Percy FitzPatrick Institute, University of Cape Town, Cape Town, South Africa 7701 Email: seabirds@birdlife.org.za
British Antarctic Survey	Dr. Richard Phillips	British Antarctic Survey, Natural Environment Research Council High Cross, Madingley Road, Cambridge CB3 0ET, UK Tel. +44 (0) 1223 221 610; Fax. +44 (0) 1223 221 259 Email: RAPHIL@bas.ac.uk
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Falkland Islands Government	Dr. Richard Davies Ms. Dominique Giudicelli	Councillor for the Environment, Legislative Department, Gilbert House, Stanley, Falkland Islands, FIQQ 1ZZ Tel: +500 27451; Fax: +500 27456 Email: rdavies@sec.gov.fk Environmental Planning Officer, Environmental Planning Department, Falkland Islands Government, Stanley, Falkland Islands FIQQ 1ZZ. Tel: +500 27390; Fax: +500 27391 Email: dgiudicelli.planning@taxation.gov.fk

	<p>Mr. Nick Rendell</p> <p>Mr. John Barton</p> <p>Dr. Paul Brickle</p>	<p>Environmental Planning Department Email: nrendell.planning@taxation.gov.fk</p> <p>Director, Falkland Islands Fisheries Department, PO Box 598, Stanley, Falkland Islands, FIQQ 1ZZ. Tel: +500 27260 Email: director@fisheries.gov.fk</p> <p>Fisheries Scientist, Falkland Islands Fisheries Department, PO Box 598, Stanley, Falkland Islands FIQQ1ZZ. Tel: +500 27260 Email: pbrickle@fisheries.gov.fk</p>
<p>Falklands Conservation</p>	<p>Mr. Grant Munro</p> <p>Mr. Oliver Yates</p> <p>Mr. Nic Huin</p> <p>Mr. Tim Reid</p> <p>Ms. Sarah Crofts</p>	<p>Director, Falklands Conservation, The Jetty Centre, PO Box 26, Stanley, Falkland Islands FIQQ 1ZZ. Tel: +500 22247; Fax: +500 22288 Email: grant.munro@conservation.org.fk</p> <p>Falklands Conservation, Project Leader, Albatross and Petrel Programme Email: oli.yates@conservation.org.fk</p> <p>Falklands Conservation, Science Officer Email: nic.huin@conservation.org.fk</p> <p>Falklands Conservation, Seabird Ecologist, Albatross and Petrel Programme Email: lugensa@yahoo.com.au</p> <p>Falklands Conservation, Seabird Mitigation Observer, Albatross and Petrel Programme Email: sarah.crofts@conservation.org.fk</p>

	<p>Ms. Ali Liddle</p> <p>Mrs. Ann Brown</p>	<p>Falklands Conservation, Education Officer, Email: ali.liddle@conservation.org.fk</p> <p>Falklands Conservation, UK Executive Officer UK Office: 1 Princes Avenue, London, N3 2DA, UK. Tel: +44 208 343 0831 Email: ann@falklands-nature.demon.co.uk</p>
<p>Government of South Georgia and South Sandwich Islands</p>	<p>Ms. Harriet Hall</p> <p>Mr. Gordon Liddle</p> <p>Mr. Richard McKee</p> <p>Mr. Darren Christie</p>	<p>Assistant Commissioner Government of South Georgia and South Sandwich Islands Government House, Stanley, Falkland Islands FIQQ 1ZZ. Tel: +500 27433 Email: harriet.hall@fco.gov.uk</p> <p>Operations Manager Government of South Georgia and South Sandwich Islands Email: gordon.liddle@fco.gov.uk</p> <p>Assistant Operations Manager Government of South Georgia and South Sandwich Islands Email: richard.mckee@fco.gov.uk</p> <p>Habitat Restoration Officer Government of South Georgia South Sandwich Islands Tel: +500 22811 Email: sg.habitat@horizon.co.fk</p>
<p>Joint Nature Conservation Committee</p>	<p>Mr. Mark Tasker</p>	<p>Joint Nature Conservation Committee, Dunnet House, 7 Thistle Place, Aberdeen, AB10 1UZ, Scotland. Tel: +44 1224 655701; Fax: +44 1224 621488 Email: mark.tasker@jncc.gov.uk</p>

New Island South Conservation Trust	Mr. Ian J. Strange MBE	The Dolphins, Stanley, Falkland Islands, FIQQ 1ZZ Email: furseal@horizon.co.fk
Projeto Albatroz	Dr. Tatiana Neves	Projeto Albatroz - Ibama Rua Rei Alberto I, 450 /05, Ponta da Praia, Cep: 11030-380 Santos- SP, Brazil Tel/ Fax: +55 13 3261 4039; Cel: +55 13 9126 1100 Email: ineves@projetoalbatroz.org.br
South Georgia Surveys	Mrs. Sally Poncet	South Georgia Surveys, P.O. Stanley, Falkland Islands, FIQQ 1ZZ Tel/Fax: +500 21826 Email: sallyponcet@horizon.co.fk
Tristan da Cunha Government	Mr. James Glass	Natural Resources Department, Tristan da Cunha, South Atlantic, TDCU 1ZZ Via Cape Town, South Africa Email: tristanmrd@uuplus.com
United Kingdom Foreign Commonwealth Office	Dr. Mike Richardson	Polar Regions Unit, Overseas Territories Department, Foreign Commonwealth Office, London SW1A 2AK, UK. Tel: +44 (0) 207 008 2616 Email: mike.Richardson@fco.gov.uk
Universidad Austral de Chile	Dr. Carlos Moreno	Director Instituto de Ecología y Evolucion Universidad Austral de Chile, Valdivia, Chile. Tel: +56 63 221486 (lab); Fax: +56 63 221344 Email: cmoreno@UACH.cl
University of Cape Town	Mr. John Cooper	Avian Demography Unit, Department of Statistical Sciences, University of Cape Town, Rondeboch 7701, South Africa Email: jcooper@adv.uct.ac.za

4.1.2 List of contact addresses for invited delegates, who were unable to attend

Organisation	Name	Contact information
Aves Argentinas	Mr. Fabian Rabuffetti	Seabird Coordinator, Aves Argentinas 25 de Mayo 749, 2° “6” Buenos Aires C1002 ABO, Argentina. Tel: +54 11 4312 1015 ext 103 Email: rabuffetti@avesargentinas.org.ar
Aves Uruguay	Mr. Adrian Stagi	Scientific Programme Co-ordinator, Aves Uruguay Canelones 1164, Montevideo, Uruguay Tel: +598 (02) 9028642 Email: albatross@movinet.com.uy
BirdLife International	Dr. Ian Davidson	Head of Americas Division, Americas Division Office Casilla 17-17-717, Vicente Cardenas E5-75 y Japon Quito, Ecuador Tel: +593 (2) 245 3645; Fax: +593 (2) 277 059 Email: davidson@birdlife.org.ec
	Dr. Esteban Frere	South American Coordinator, Aves Argentinas 25 de Mayo 749, 2° “6”, Buenos Aires, C1002 ABO Argentina Tel: +54 11 4312 1015 Email: avesmarinas.sudamerica@avesargentinas.org.ar
Centre National des Recherches Scientifiques	Dr. Henri Weimerskirch	CEB Chize-CNRS UPR 1934, 79360 Villiers en Bois, France. Tel: +33-05-49-09-7815; Fax: +33-05-49-09-6526 Email: henriw@cebc.cnrs.fr
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<p>Department for the Environment, Food and Rural Affairs</p>	<p>Mr. Jim Knight MP</p> <p>Mr. Eric Blencowe</p> <p>Ms. Jean Smyth</p> <p>Mr. Andy Williams</p> <p>Mr. Mike Rimmer</p>	<p>Minister for Rural Affairs, Landscape and Biodiversity Nobel House, 17 Smith Square, London SW1P 3JR, UK. Tel: +44 08459 335577 Email: jim.knight@defra.gsi.gov.uk</p> <p>Global Wildlife Division, Temple Quay House 2 The Square, Bristol BS1 6EB, UK. Tel: +44 (0)117 372 8295 Email: eric.blencowe@defra.gsi.gov.uk</p> <p>Global Wildlife Division Email: jean.smyth@defra.gsi.gov.uk</p> <p>Global Wildlife Division Email: andy.williams@defra.gsi.gov.uk</p> <p>Sea Fisheries Conservation Division Nobel House, 17 Smith Square, London SW1P 3JR, UK Tel: +44 08459 335577 Email: mike.rimmer@defra.gsi.gov.uk</p>
<p>Forum for the Conservation of the Patagonian Sea and Areas of Influence</p>	<p>Dr. Rodolfo Werner</p>	<p>Marine Policy Advisor Castelli 7, 9120 Puerto Madryn, Argentina +54 2965 450477 rodolfo.antarctica@gmail.com</p>
<p>New Island South Conservation Trust</p>	<p>Dr. Paulo Catry</p>	<p>Research Scientist, Field Station New Island South, Falkland Islands FIQQ 1ZZ. Tel: +500 42314 paulo.catry@netc.pt</p>

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	Dr. Geoff Hilton	Senior Research Biologist Email: geoff.hilton@rspb.org.uk
	Ms. Sarah Sanders	UK Overseas Territories Officer Email: sarah.sanders@rspb.org.uk
	Dr. Euan Dunn	Senior Marine Policy Officer Email: euan.dunn@rspb.org.uk
Universidad de Mar del Plata	Dr. Marco Favero	Departamento de Biología, Facultad de Ciencias Exactas y Naturales, Universidad de Mar del Plata – CONICET, Funes 3250 (B7602AYJ), Mar del Plata, Argentina Email: mafavero@mdp.edu.ar

4.2 Programme and abstracts of oral presentations

4.2.1 Presentation Schedule

Date	Time	Item	Details	Chair/ Presenter	Presentation title
Sunday 12 March					
		Session 1 Presentations: ACAP structure and function		John Barton	
	0900		Introduction	Councillor Davies	Introduction and welcome to the workshop
	0920		ACAP Secretariat	Helen Riley and Barry Baker	Agreement on the Conservation of Albatrosses and Petrels (ACAP): Presentation from the Secretariat
	0940		ACAP Advisory Committee	Mark Tasker	Agreement on the Conservation of Albatrosses and Petrels (ACAP): The Advisory Committee
	1000		ACAP United Kingdom	Mark Tasker	Agreement on the Conservation of Albatrosses and Petrels (ACAP): The role of Defra
	1020	<i>Coffee</i>			
		Session 1 presentations continued: Government perspectives		John Barton	
	1040		Falkland Islands	Dominique Guidicelli	ACAP and the work of the Environmental Planning Department, Falkland Islands Government

Date	Time	Item	Details	Chair/ Presenter	Presentation title
	1100		South Georgia & South Sandwich Islands	Harriet Hall	ACAP relevance to SGSSI
	1120		Tristan da Cunha	John Cooper	The relevance of the Agreement on the Conservation of Albatrosses and Petrels to the United Kingdom Overseas Territory of Tristan da Cunha
	1140		British Antarctic Territory	Mike Richardson	ACAP relevance to the British Antarctic Territories
	1200	Lunch			
		Session 2 presentations: Land-based conservation and management			
	1300		Tristan da Cunha	John Cooper	Seabird colonies of ACAP species and current management at Tristan
	1320		Falkland Islands	Ian Strange	Research and monitoring on albatross and petrels on New Island South, Falkland Islands
				Nic Huin	Status and trends of the ACAP species breeding in the Falkland Islands.
				Oliver Yates	Current management of seabird colonies in the Falkland Islands.
	1420		South Georgia and South Sandwich Islands	Sally Poncet	Status and trends of South Georgia's ACAP species and management of breeding locations
				Richard McKee	SGSSI visitor management policy on seabirds and the

Date	Time	Item	Details	Chair/Presenter	Presentation title
	1500	<i>Coffee</i>			practicalities with implementation
		Session 3 presentations: At-sea research and management of seabird-fishery interactions		Mark Tasker	
	1520		Falkland Islands	Tim Reid	Finding the distribution of seabirds: comparing at-sea surveys and satellite tagging
	1600		South Georgia and South Sandwich Islands	Richard Phillips	Seabird – fishery interactions and the development and initial results of mitigation measures implemented in the trawl fishery
	1640		Tristan da Cunha	Gordon Liddle	Satellite tracking of seabirds from South Georgia: foraging ranges and overlap with fisheries
	1700		South Africa	James Glass	Fisheries associated impacts and mitigation measures in South Georgia fisheries
	1720	<i>End</i>		Sam Peterson	Seabird by-catch on longlines at Tristan da Cunha
Monday 13 March					
	0900		Brazil	Mark Tasker Tatiana Neves	Seabirds by-catch and conservation strategies in Brazil
	0920		Chile	Carlos Moreno	Seabird interactions with Chilean longline vessels in the South West Atlantic

Date	Time	Item	Details	Chair/ Presenter	Presentation title
		Session 4 presentations: International conservation perspectives		Grant Munro	
	0940		USA	Ramunas Zydelis	Global by-catch assessment project
	1000	<i>Coffee</i>			
	1020		National Plans Of Action	Ben Sullivan	National Plan Of Action - Seabirds
	1040		RFMOs	Ben Sullivan	Regional Fishery Management Organisations: their duties and performance in reducing by-catch of albatrosses and petrels
	1100		CCAMLR	John Croxall	CCAMLR: fishery management – the role of RFMOs
	1120		BirdLife International	Ben Sullivan	The BirdLife International Global Seabird Programme
	1200	<i>Lunch</i>			

4.2.2 Abstracts of oral presentations

Agreement on the Conservation of Albatrosses and Petrels (ACAP): Presentation from the Secretariat

Helen Riley¹ and Barry Baker²

¹*Scottish Natural Heritage (ACAP Secretariat October 2004 to August 2005);* ²*ACAP Secretariat*

This presentation describes the ACAP Agreement, the role of the Secretariat and the priorities for implementation agreed at the first Meeting of the Parties. The ACAP Agreement was developed in response to the recognition that albatrosses and petrels are among the most threatened birds in the world, with mortality from interactions with fishing vessels the most serious threat to most species. ACAP is a multilateral agreement, developed under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), which seeks to conserve albatrosses and petrels by coordinating international activity to mitigate known threats. The specific objective of the Agreement is to achieve a favourable conservation status for all species of albatrosses and petrels listed on Annex 1, through the implementation of an Action Plan included in Annex 2. ACAP is currently a Southern Hemisphere Agreement, which may in the future be extended to include Northern Hemisphere species. ACAP entered into force on 1 February 2004. To date eight Parties have ratified the Agreement: Australia, Ecuador, France, New Zealand, Peru, South Africa, Spain and the United Kingdom; and a further three Countries: Argentina, Brazil, and Chile, have signed but not yet ratified. The Agreement establishes three entities. The Meeting of the Parties is the decision making body of ACAP, overseeing the implementation of the Agreement; the Secretariat coordinates and administrates activity under the Agreement; and the Advisory Committee provides advice on the implementation of the Agreement to the Meeting of Parties, the Secretariat, Parties, Signatories and others. Key functions of the ACAP Secretariat are to promote the Agreement and its objectives; coordinate activities under the Agreement; arrange and service sessions of the Meeting of the Parties and the Advisory Committee; collate information for reports on the implementation of the Agreement; and administer the ACAP budget. Promoting the Agreement includes facilitating coordination between Parties, non-Party Range States, and international and national organisations and institutions whose activities are directly or indirectly relevant to the conservation of albatrosses and petrels. The ACAP Secretariat is based in Hobart, Tasmania, staffed by Warren Papworth with assistance from Barry Baker. The Secretariat is currently an 'interim' one, pending the development of a Headquarters Agreement with the Australian Government, which among other things will provide the Secretariat with the legal status it requires to become an independent entity. As there is limited funding for Secretariat staff in the current budget, Australia currently contributes additional staff time (from employees of the Australian Antarctic Division) to the running of the Secretariat. Australia also provides office accommodation for the Secretariat free of charge. The UK contributed staff resources to the Secretariat between October 2004 and March 2005. The first Meeting of the Parties to ACAP (MOP1), convened in Hobart between 10-12 November 2004; identified two priorities for implementation of the Agreement and Action Plan: fisheries by-catch of albatrosses and petrels; and the management and protection of breeding sites. Promotion of ACAP and extension of its membership was also identified as a priority, to secure the resources and influence required to achieve its objectives. Other key decisions of MOP1 were the agreement of a budget and scale of contributions from Parties; acceptance of Australia's offer to host the permanent Secretariat in Hobart; establishment of the Advisory Committee, a work programme, and two Working Groups on Status and Trends and Taxonomy; and agreement of a set of criteria for defining and reacting to 'emergency' situations for albatrosses and petrels (e.g. where a species is threatened by a catastrophic event). There was a strong sense of cooperation amongst participants and the Meeting of Parties was pleased to receive presentations and offers of collaboration from a number of

observer organizations including BirdLife International, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), and the Scientific Committee on Antarctic Research (SCAR).

Agreement on the Conservation of Albatrosses and Petrels (ACAP): The Advisory Committee

Mark Tasker (Chair ACAP Advisory Committee)
Joint Nature Conservation Council

The Advisory Committee is the body established to provide expert advice to ACAP. It is comprised of one member for each Party to the agreement, who may be accompanied by advisors. Further experts may be invited and observers may attend as well.

The Agreement calls for the Committee to:

- provide advice and information;
- agree and maintain a taxonomic listing;
- make recommendations on the Action Plan and its implementation;
- prepare reports on progress for the Meeting of Parties, this includes a statement on the status and trends of albatrosses and petrels;
- develop a system of indicators of success;
- act as a watchdog for emergency situations.

The first meeting of the Advisory Committee was 20–22 July 2005 in Hobart. We considered the priorities identified at MOP1. Key outcomes of this meeting were agreement on the first steps in the challenging process of engaging with Regional Fisheries Management Organisations (RFMOs); identification of a set of priorities for future remote tracking studies of ACAP species to add to the BirdLife Satellite Tracking database, so that key risk areas of overlap between foraging ranges and fisheries, can be identified; and establishment of a new working group to consider threats to albatrosses and petrels at breeding sites.

There are now three Advisory Committee Working Groups:

- Status and trends – chair Rosemary Gales;
- Breeding sites – chair Susan Waugh;
- Taxonomy – chair Mike Double.

The working groups are key to moving co-operative work forward between Advisory Committee meetings and are the source of many of the demands for information and data from Parties. The status and trends group has devised reporting format and has already collected together much information. The breeding sites group is establishing the status of breeding sites, with biological, management and legal position information being collected. The taxonomy group has made progress in establishing an agreed taxonomy and has focussed on key “difficult” pairs of species. Working groups are not technically permanent, but a database for breeding information will be established and this is likely to require servicing into the future.

Agreement on the Conservation of Albatrosses and Petrels (ACAP): The role of Defra

Mark Tasker
Joint Nature Conservation Council

The Department of Environment, Food and Rural Affairs (Defra) is UK’s co-ordinating body for the implementation of ACAP (as well as for the Convention on Migratory Species (CMS) and many other Agreements and Memoranda of Understanding under CMS).

Defra's role as the UK representative to ACAP has two main components, which are overlapping: Participating as the UK representative at ACAP meetings; and Co-ordinating a UK position on ACAP issues

As the UK representative at ACAP Meetings of Parties, it leads the UK delegation. It seeks to help secure consensus with other parties on issues so that ACAP can move forward.

As for co-ordination, Defra will seek views from all stakeholders.

From the Overseas Territories (OTs) on ACAP matters so that their views are represented at ACAP meetings

From other Whitehall Government Departments/sections within Defra so that their views are reflected in the UK position presented at ACAP meetings, examples include Foreign Office (FCO), Department for International Development and other parts of Defra with interests in fisheries and marine issues.

From the scientific advisers on scientific matters

From other stakeholders, such as the UK non-governmental organizations (e.g. BirdLife International) and corporate sector – OT Government contacts to take account of any local NGO interest in the position they report to Defra.

It finds a way forward on issues where views from OTs, Whitehall and/or the scientists don't entirely agree (for instance the timing of Advisory committee meetings). It reports the outcome of meetings to OT Governments and interested Government departments. Defra will endeavour to keep UK stakeholders advised of ACAP developments – a web-based list server project to provide a UK resource on albatross and petrel issues is being developed and regular meetings with UK-based stakeholders have been held. After recent discussions, a coordinated bi-focal approach to the implementation of ACAP by the UK will be established, with Defra leading on governmental aspects and the Joint Nature Conservation Committee (JNCC) leading on scientific conservation aspects. Defra (on behalf of the UK government) also provides support for the implementation of ACAP in financial, scientific and advocacy-related forms. On finance, Defra pays the UK annual subscription of £35,000, also makes voluntary contributions. Funding was provided during the negotiation stage, and since the first MoP, contributions have totalled £45,000. In addition, Defra also put £25,000 into an albatross and petrel census project in SGSSI in 2005 via the ACAP secretariat. The UK also funds scientific advice, both to the British Antarctic Survey and for conservation aspects, the Joint Nature Conservation Committee (JNCC). Defra is the sponsor department for JNCC. In terms of advocacy, Defra and FCO ministers and senior officials have promoted ACAP during bilateral meetings with other governments, particularly with a view to encouraging countries acceding to ACAP. Defra provides advice and information on ACAP matters to the media, MPs, NGOs, corporate organisations, schools and members of the public. Of greater direct concern to albatross conservation, the High Seas Task Force, set up by OECD to consider ways of combating illegal, unregulated and unreported (IUU) fishing, was launched in December 2004, under the chairmanship of UK Defra Fisheries Minister, Ben Bradshaw. The Task Force will be issuing its report with recommendations on 3 March 2006. A special unit has been set up within Defra to take this work forward. The Task Force proposals are likely to focus on ways to promote better co-ordination of monitoring, control and surveillance and sharing of intelligence. Key to this will be ensuring that Regional Fisheries Organisations work more effectively. Defra (often via the European Commission) is also pressing for fishing practices that mitigate by-catch.

ACAP and the work of the Environmental Planning Department, Falkland Islands Government

Dominique Guidicelli

Environmental Planning Department

The Falkland Islands have 3 ACAP species. Much good practice has taken place in the Fisheries Department, regarding mitigation measures to reduce bird mortality. Falklands Conservation, the New Island South Conservation Trust and others have also done much good work to study and conserve the species in question. What about the Falkland Islands Government “Environmental Planning” Department (EPD)?

Much EPD work has focused on getting background documents containing relevant policies adopted or, still emerging. A summary is as follows.

Conservation and Wildlife Ordinance 1999 – all birds and eggs are protected with a few exceptions.

The Environment Charter (2001) setting out commitments which are a mix of strategic policy objectives and specific undertakings. The FIG and the British Government signed this. One of the commitments was that a detailed Strategy should be drafted.

A Conservation and Biodiversity Strategy Officer was appointed in April 2003.

By April 2005, a draft Conservation and Biodiversity Strategy (CBS) had been drafted with 2 “sister” documents: Baseline Survey and Trends and Pressures. The CBS has yet to be amended to bring it to a final stage for adoption by FIG. It has had some stakeholder involvement (priority setting workshop, 2005). The fundamental premise behind the CBS is that sustainable development demands proper integration of environmental concerns into economic and social development. The CBS acknowledges the issues relating to ACAP and contains specific proposals for ACAP species.

Falkland Islands Structure Plan and Stanley Town Plan – 2004. Both plans set out their future sustainable development scenarios. The Structure Plan, contains policies dealing with the terrestrial and marine environment but more specifically, LHB7: Protection of Species: *...Proposals raising specific environmental concerns relating to habitats or species of recognised importance will be required to be accompanied by an environmental impact statement.* E6 Habitats and species is another pertinent Policy.

Biosecurity Strategy: (Dec 2004). The strategy contains recommendations, which have been prioritised in line with available resources. Some deal with the control of invasive species and their risk to wildlife. A Bio security Officer has been appointed in the Department of Agriculture. The work of this post is backed up by a group of Government staff, including EPD, Customs (border control), a vet and tourism.

Environmental Impact Assessment (EIA) regulations as part of Planning Ordinance, based on European Directive with same project schedules. Planning control in FIs extends to 12 nautical miles.

EIA regulations are also embodied within the Offshore Minerals Ordinance (1994) for offshore exploration or exploitation projects.

The Environmental Committee. The committee is important in that it makes key environmental recommendations to FIG. It comprises stakeholders who participate in discussions and decisions. It is open to the public, which is a key aspect of democratic decision making in the islands. Key

documents such as the CBS, bids for scientific research, bids for funding from FIG's Environmental Studies Budget (e.g. match funding for FC's Albatross and Petrel work) and other programmes and proposals of other FIG departments, NGOs and external organisations are discussed.

ACAP: South Georgia and South Sandwich Islands

Harriet Hall

Assistant Commissioner and Director of Fisheries

Seven ACAP species breed in South Georgia: Wandering Albatross, Black-browed albatross, Grey-headed albatross, Light-mantled Sooty Albatross, Northern and Southern Giant Petrels (Northern and Southern), White-Chinned Petrel. Not all nest in easily demarcated sites/colonies. Smaller islands, such as Albatross Island, Prion Island, Bird Island can be easily demarcated. But some species, such as White-chinned Petrels, are not in defined areas. Legislation is in place to implement the requirements of ACAP and the Government places a high priority on environmental issues and species conservation. On behalf of the Government of South Georgia, Sally Poncet has already carried out a survey of all Albatross species. She is currently working on a survey of Petrels, sponsored by GSGSSI and OTEP. The first year of fieldwork was completed this summer. Both these surveys have had significant support and input from BAS. Both longline and pelagic trawl fisheries operate legally around South Georgia. South Georgia licence conditions incorporate CCAMLR Conservation Measures and bird mortality in the longline fishery is regarded as negligible. New mitigation methods under development in the trawl fishery have produced promising results. The Government's approach to tourism is based on the view that it is important for visitors to see these beautiful birds in their own habitats as a means of raising awareness, but that disturbance must be avoided. We co-operate with industry wherever possible. Some sites are closed to visitors (Bird Island and others) and if necessary we will close further sites, as we did with Albatross Island. Of great relevance to smaller bird species is the presence of rats on much of South Georgia. We are undertaking a feasibility study to consider the implications of rat eradication and the South Georgia Heritage Trust is actively fund-raising for this work. One other issue which may arise in relation to site protection is that of habitat destruction by natural means – in particular for South Georgia by the growing fur seal population.

The relevance of the Agreement on the Conservation of Albatrosses and Petrels to the United Kingdom Overseas Territory of Tristan da Cunha

John Cooper, Honorary Tristan Conservation Officer, University of Cape Town

James Glass, Natural Resources Department, Tristan da Cunha

Mike Hentley, Administrator, Tristan da Cunha

Six of the 28 (new taxonomy) species of albatrosses and petrels listed on Annex 1 of the Agreement on the Conservation of Albatrosses and Petrels (ACAP) breed within the United Kingdom Overseas Territory of Tristan da Cunha. A further seven ACAP species have been recorded as non-breeding visitors to Tristan territorial waters and exclusive Economic Zone (EEZ). Three of the six breeding species, the Tristan Albatross *Diomedea dabbenena*, the Atlantic Yellow-nosed Albatross *Thalassarche chlororhynchos* and the Spectacled Petrel *Procellaria conspicillata* are endemic to the territory. The Tristan Archipelago supports approximately two-thirds of the global population of the Sooty Albatross *Phoebastria fusca*. Five of the six breeding species have been accorded a World Conservation Union (IUCN) category of threat by BirdLife International. The three albatross species are classified as Endangered (facing a very high risk of extinction in the wild), the Spectacled Petrel is considered to be Critically Endangered (extreme risk of extinction) and the

Southern Giant Petrel *Macronectes giganteus* to be Vulnerable (high risk of extinction). The sixth species, the Grey Petrel *Procellaria cinerea*, is classified as Near Threatened (close to qualifying or likely to qualify for a threatened category in the near future). Within the territory and its territorial and EEZ waters ACAP species face major threats on land from introduced rodents (especially from the House Mouse *Mus musculus* on the Tristan Albatrosses of Gough Island) and from both licensed and illegal, unreported and unregulated (IUU) fishing. Outside the territory, ACAP species face threats from long line fishing off the coasts of South America and southern Africa. The species most affected by such incidental mortality are the Tristan and Atlantic Yellow-nosed Albatrosses and the Spectacled Petrel. Currently, Tristan is not included within the United Kingdom's 2004 ratification of ACAP, because its existing Conservation Ordinance was not considered by UK authorities to be sufficiently "ACAP-friendly". Accordingly, a new Conservation Ordinance has been produced, due for enactment in early 2006. This ordinance uses "reverse listing" to offer formal protection to all ACAP species breeding within and visiting the territory. Breeding habitats of ACAP species are also legally protected against destruction and disturbance. It is believed the new ordinance is in accord with the Articles and Action Plan of ACAP, and it is thus expected that Tristan will be included within the UK's ratification of the Agreement by the time of the Second Session of the Meeting of Parties, due to be held in the second half of 2006.

The following activities are underway that will lead to an improved conservation status for ACAP species occurring within the Tristan Archipelago:

Production of a Tristan Biodiversity Action Plan in terms of the Convention on Biological Diversity.

Production of a management plan for Nightingale Island and a revision of the management plan for the Gough Island Nature Reserve.

The appointment of a full-time Conservation Officer within the Tristan Natural Resources Department who will monitor ACAP species and regulate eco-tourism.

A study of the biology, impacts and options for the eradication of introduced rodents on the main island of Tristan and at Gough.

Placement of observers on vessels licensed to fish within Tristan waters who report on bird by-catch and ensure mitigation methods are properly applied.

Continued ecological and demographic research and monitoring of ACAP species on all the four major islands in the territory, both at breeding sites and by remote-tracking of birds at sea.

ACAP and the British Antarctic Territory (BAT)

Mike Richardson
Foreign & Commonwealth Office

The presentation addressed both the legislative basis for ACAP in the Territory, including an explanation as to how domestic legislation integrated with Antarctic Treaty provisions, as well as a description of ACAP's implementation in the Territory. Such implementation included monitoring and reporting responsibilities.

The British Antarctic Territory (BAT) lies between 20-80° W longitude. It thus takes in the whole of the Antarctic Peninsula, the islands of the South Orkneys and South Shetlands and extends

eastwards across the Weddell Sea to abut the Norwegian Territory. But in line with Article IV of the Antarctic Treaty, all territorial claims in Antarctica, including that to the BAT, are held in abeyance for the duration of the Treaty.

There are three tiers of legislation relating to ACAP species in the BAT. These consist of international obligations under the Environmental Protocol to the Antarctic Treaty, which protects all native flora and fauna, and then national (UN) and territory (BAT) legislation which largely mirrors those provisions. Taken together they ensure absolute protection of Albatrosses and Petrels (and other native birds) by prohibiting the taking and harmful interference of such species. Other important legal provisions relate to a prohibition on the introduction of non-native species, the ability to designate “Specially Protected Species”, as well as protected areas to safeguard, if necessary, native bird habitats.

Although eight Petrel species breed in the BAT, they include only one ACAP scheduled species – Southern Giant Petrels. In addition, Wandering, Black-browed, Grey-headed and Light-mantled Sooty Albatrosses occur as migrants, as do Northern Giant Petrels and White-chinned Petrels.

Overall, figures for the population of Southern Giant Petrels are in flux and are likely to be radically revised following e.g. the recent survey in the Falklands. But of a quoted global population of around 30,000 pairs, around 1/3rd were present in the BAT. Figures on trends are also sparse, being available from few sites in Antarctica, and highly variable. At some sites numbers had declined dramatically, at others increased – if only marginally. The reasons for the former have been attributed to station construction, overflights, fishing and increasing tourism. Mortality from fishing was most likely occurring well away from Peninsula waters, whilst data from sites most visited by tourists showed no adverse impacts on Southern Giant Petrel numbers.

Following a UK initiative at the Antarctic Treaty Consultative Meeting (ATCM), the Scientific Committee on Antarctic Research (SCAR) had been requested to examine the status of Specially Protected Species under Annex II of the Environmental Protocol and recommend additions and deletions to the Specially Protected Species list. In the light of that review it was anticipated that Southern Giant Petrel, along with four of the migrant species of Albatross and Petrel to the BAT, would be put forward for SPS designation. If such proposals were to be adopted, Action Plans to address the conservation of these species would be prepared.

In view of the over-arching provisions of the Antarctic Treaty and its Environmental Protocol, it was recommended that any monitoring and reporting requirements for Southern Giant Petrels within the BAT should be done by SCAR, as part of an Antarctic-wide assessment.

Seabird colonies of ACAP species and current management at Tristan

John Cooper, Honorary Tristan Conservation Officer, University of Cape Town

Marie-Hélène Burle, Rich Cuthbert, Geoff Hilton, Sarah Sanders, Erica Sommer & Johnny Wilson, Royal Society for the Protection of Birds, U.K.

Peter Ryan & Ross Wanless, University of Cape Town

Andrea Angel, Core Initiatives

James Glass, Norman Glass & Simon Glass, Tristan da Cunha

Derek Brown, New Zealand

Six ACAP species breed within the Tristan Archipelago. The endemic Tristan Albatross *Diomedea dabbenena* breeds on Gough Island (2004: 1800 pairs) and as a remnant population on Inaccessible Island (2-3 pairs). The species no longer breeds on the main island of Tristan. The endemic Atlantic

Yellow-nosed Albatross *Thalassarche chlororhynchos* and the Sooty Albatross *Phoebastria fusca* breed on all the islands in the archipelago with estimated total annually-breeding populations of 34 550 and 8200 pairs, respectively. The Southern Giant Petrel *Macronectes giganteus* breeds only on Gough Island (225-245 pairs), although it once bred on Tristan. The Spectacled Petrel *Procellaria conspicillata* is endemic to Inaccessible Island with a population estimated in 2004/05 as 20 000 adult birds. The Grey Petrel *P. cinerea* breeds on Tristan and Gough. No current population estimates exist. Estimates for the 1970s are of 50-100 pairs and “hundreds of thousands of pairs”, respectively. Breeding is suspected on Inaccessible Island but remains unproven due to the lack of a winter survey. Human exploitation and disturbance most probably caused the loss of the Tristan Albatross and Southern Giant Petrel populations of Tristan. Feral domestic pigs *Sus scrofa* most probably caused the near-extinction of the Tristan Albatross on Inaccessible. The three species of albatrosses have shown decreases at all current breeding islands where sufficient data exist. The Southern Giant and Spectacled Petrel populations appear to have increased in size in recent years. Numbers of Grey Petrels at Gough may be decreasing, but the evidence is tenuous. The species continues to breed on Tristan but numbers are unknown. Population decreases are due to longline mortality at sea (all albatrosses and the Spectacled Petrel) and to predation by House Mice *Mus musculus* on Gough (Tristan Albatross and possibly, although unproven, Grey Petrel). The Grey Petrel population on Tristan was most likely seriously affected by a combination of past human exploitation of eggs and chicks, and predation by feral domestic Cats *Felis catus* (now believed to no longer occur) and Black Rats *Rattus rattus*. Human exploitation of Atlantic Yellow-nosed and Sooty Albatrosses (mainly of large chicks) on Tristan, Inaccessible and Nightingale lasted well into the 20th century, but no longer occurs. All ACAP species breeding at the Tristan Archipelago, and their breeding habitats, are now fully protected against exploitation, disturbance and damage in terms of the new Conservation Ordinance. The nature reserve and World Heritage Site status of Gough and Inaccessible Islands add further formal protection. Currently, tourism is not allowed at Gough Island in terms of the island’s management plan. Tourists landing on Nightingale and Inaccessible Islands are managed in terms of existing and in-preparation management plans. An Overseas Territories Environment Programme (OTEP)-funded project is investigating management options for introduced rodents within the Archipelago. Eradication feasibility studies have been conducted for Gough and Tristan and an operational plan for the eradication of rats (and hopefully mice) by the aerial broadcasting of poison bait is currently being drafted for Tristan. A decision as to whether to proceed to drafting an operational plan for Gough will be made after a site visit in September 2006. Field research on affected seabirds and mice on Gough and on rats on Tristan is currently ongoing in order to provide data (e.g. on densities, annual cycles and diet of rodents) necessary for “fine-tuning” the operational plans.

Research and monitoring on albatrosses and petrels on New Island South, Falkland Islands

Ian Strange & Paulo Catry
New Island South Conservation Trust

New Island harbours the largest seabird colony of the Falkland Islands, with millions of Thin-billed Prions and many thousand albatrosses, penguins and other species. The New Island South Conservation Trust, a UK registered charity manages a reserve, also a FIG protected area, where, besides direct conservation initiatives, there is a strong emphasis on research and monitoring on diverse taxa, including albatrosses and petrels. A research station has been built on the island and in the 2005/06 field season as many as 9 bird and mammal researchers worked on the island. The longest and most detailed monitoring data on a Black-browed Albatross colony in the Falkland comes from this site, showing a long-term increase over 28 years, to the present. Although this trend might not reflect the overall tendency in the Falklands, it is interesting that at least numbers of other medium-sized colonies are on the increase. In 2003/04 a more detailed population dynamics

study was established and is now completing its third year. Over 500 adult birds have been marked with darvic rings and their fate recorded annually. Preliminary data indicate an annual adult survival rate of 92%, with an annual recapture rate of virtually 100%. There was a limited albatross adult mortality associated with an apparent harmful algal bloom in 2002/03 and 2003/04 (several adults were found dying in good body condition and with full stomachs), but this had little impact on overall numbers. Breeding success has varied between ca 30 and 50% over the past 3 years. New Island albatrosses seem to rely considerably on fisheries discards, and a sizeable part of their diet is composed of large commercial fish, such as *Micromesistius australis*. Lobster Krill *Munida gregaria* is another important component of the diet. Research is under way also focusing on genetics and systematics and on individual dietary specialisation of Black-browed Albatrosses, with potential implications for conservation.

We have also been attempting to refine and diversify methodologies for albatross counting, combining data from aerial and land-based surveys. Data collected so far suggest that, in the Falklands, sea-based counts and some land-based counts can severely underestimate numbers present at important albatross colonies.

Other work on New Island also includes low intensity monitoring of the local White-chinned Petrel colony (a very small population, but relevant in Falklands national terms) and assessment of the potential impact of introduced mammal species on burrowing petrels, such as White-chinned Petrels and Thin-billed Prions.

Status and trends of ACAP species breeding in the Falkland Islands

Nic Huin

Falklands Conservation

The Falkland Islands hold three breeding species covered under ACAP. These are the Black-browed Albatross, *Thalassarche melanophris*, Southern Giant Petrel, *Macronectes giganteus*, and the White-chinned Petrel, *Procellaria aequinoctialis*. The first comprehensive survey of White-chinned Petrel was conducted over the last two seasons. Numbers from New Island were obtained from the New Island South Conservation Trust. Burrows were inspected for occupancy by direct observation, or with the use of a burrow scope, or by call-playback. Birds were found to be breeding only on three islands and in small numbers. A total minimum number was estimated at 55 occupied nests in 2005/06. This species is one of the least studied in the Falkland Islands and there are no realistic figures existing to establish any kind of trend in its population size. Although numbers breeding in the Falkland Islands are small compared to the world population estimate of 2.5 million breeding pairs, this species only breed at seven other sites, where they are in decline. Small numbers and the ease of accessibility of the three known sites should help to conduct basic monitoring of this species. Similarly, the first full census of Southern Giant Petrels in the Falkland Islands was conducted in the 2004/05 season. In order to minimise disturbance to such a flighty species, as well as to insure total coverage, three methods were used. Adults on egg were counted in November in colonies that could be accessed and observed from a distance. Chicks were counted in February, when they are big enough to be left alone and defend themselves and aerial digital photography of colonies that couldn't be accessed. All three methods were compared to produce the final figures. Southern Giant Petrels breed at 38 different sites, with colonies ranging from one to more than 10,000 pairs. The total breeding population was estimated to be 19,816 pairs, far above previous estimates of 3,000 to 7,000 pairs. Main areas are south of the Falkland Sound and on the west of the islands. Examination of previous records existing show that this is a real increase in population size. We have no explanation for such an increase. This also means that the Falkland Islands hold 42% of the world population of this species. Monitoring of this species is now implemented, with annual counts of some colonies and repeat whole islands census every 5 years. Black-browed Albatross breed at 12 sites around the Falkland Islands. Individual colonies have been surveyed since the

1980s and two full censuses have been conducted in 2000/01 and 2005/06 seasons. Colonies were counted either directly, or by photographs (cliffs) or by an indirect method for the two large colonies on Steeple Jason and Beauchêne Island. The indirect method involved measurement of the colony area and density. In the course of the last two censuses, the methods to measure and calculate colony areas have been improved and needed to be readjusted for the first census (therefore the population size previously published). Results show that numbers are continuing to decrease from 418,000 in 2000 to 399,416 breeding pairs in 2005. This represents a decline in numbers from the previous census of 19,000 pairs, or of 0.9% per annum, compared to a decrease of 1.0% before 2000. In addition to actual numbers calculated, a library of fixed position photographs of key sites confirms such a decline since the 1980s and 1990s. The Falkland Islands holds 64% of the world population, which is in serious decline.

Current management of seabird colonies in the Falkland Islands

Oli Yates

Falklands Conservation

The Falkland Islands hold globally important breeding populations of Black-browed Albatross, *Thalassarche melanophris*, and Southern Giant Petrel, *Macronectes giganteus*. There are also a few small breeding populations of White-chinned Petrel, *Procellaria aequinoctialis*, important at a national scale, on a number of offshore islands. Black-browed Albatrosses are found on 11 offshore islands and one main island site where they form large breeding colonies on cliffs or sloping coastal ground. White-chinned Petrels are found on 3 offshore islands where they generally favour burrows in tussac cover. Southern Giant Petrels are found on 21 islands and at a number of sites on the mainland of East and West Falklands. The Southern Giant Petrels nest in colonies on sand, peat or pebble ground and are very easily disturbed. Of the 32 island sites with ACAP species present, 24 (75%) are privately owned whilst the remaining eight (25%) are government owned, and although the majority of the government owned sites are designated National Nature Reserves, there is currently only a single management plan in force to back up this designation. The high percentage of private ownership has serious implications for colony management and conservation, despite many landowners holding wildlife conservation as a priority for the islands. Implications mainly relate to land-use including site access, change of ownership and diversification of economic activity. Historically, egg collection for consumption, rendering down of birds for oil, heavy fishery impacts and habitat modification have caused significant reductions in the numbers of seabirds in the Falklands. The introduction of several pest species including foxes, cats and rats, although unstudied in the Falklands, appears to have caused local extinctions of some seabirds. At present, 11 of the 32 sites have one or more introduced mammal species present, 13 have no introduced mammals and at eight sites the status remains undetermined. Up to the present day, the majority of research has occurred through at-sea observation and mitigation development. Private ownership of island sites has impeded long-term research due to limited and changeable access permission. Colony research has therefore been limited to population counts and censuses. A downturn in the agricultural sector and the need to diversify farm income streams has coincided with the development of both the Antarctic cruise industry and promotion of land-based tourism. Many landowners are now seeking to develop tourism, bringing with it the risks associated with increased access. What remains is uncertainty and lack of governmental legislation over the growing tourism sector and progression of invasive species control at seabird colonies.

Status and trends of South Georgia's ACAP species and management of breeding locations

Sally Poncet

South Georgia Surveys

South Georgia holds one of the world's most abundant and diverse seabird communities. The total breeding population of its 25 species of seabirds probably exceeds 30 million pairs. Seven of these species are protected by

ACAP: Grey-headed Albatross, Light-mantled Sooty Albatross and White-chinned Petrel (most important global breeding site), Wandering Albatross (second after Prince Edward Islands), Black-browed Albatross (third after Falkland Islands and Chile), Southern Giant Petrel and Northern Giant Petrel.

Giant petrels and White-chinned Petrels breed in scattered colonies along most of the island's 1,100 km-long coastline. Wandering Albatross are found at 30 sites and Black-browed Albatross colonies at 15, of which five also contain Grey-headed Albatross colonies. Validated census data from an island-wide albatross survey in 2003/04 gave a total breeding pair population of 2,857 Wandering, 90,600 Black-browed and 77,500 Grey-headed albatrosses. The use of digital photography in this census was an important step in the development of reliable repeatable albatross census techniques. Counts for southern and northern giant petrels sourced from broadscale unvalidated surveys in the mid 1980s, give estimates of 4,654 and 4,310 pairs respectively. 1970s' estimates for Light-mantled Sooty Albatrosses (7,500 pairs) and White-chinned Petrels (2 million pairs) data are considerably less reliable. The 2003/04 survey confirmed an island-wide decline of 30% in the Wandering Albatross population since 1984, and similar declines for Black-browed and Grey-headed Albatrosses, all of which parallel decadal changes documented in long-term studies on Bird Island. In particular, the current 4.5% annual decline for Wandering Albatross is of grave concern. Given the long time span involved and consistent downward pattern of the trends, this species' conservation status (currently IUCN Vulnerable) is critical at the regional scale. There are no available population trend data for light-mantled sooty albatross. Similarly, little is known of the island-wide conservation status of White-chinned Petrels or Southern and Northern Giant Petrel populations. However, provisional data from 2005/06, the first year of a two year ACAP petrel survey, indicate similar trends elsewhere at South Georgia to those documented at Bird Island for Southern Giant Petrel (stable) and Northern Giant Petrel (increasing). Sufficient data are not yet available to determine the current status of White-chinned Petrel, although numbers are considered to have declined at Bird Island by 2% per annum during the 1980s and 1990s. Fisheries-associated activities are acknowledged as the major cause of documented population declines for South Georgia's Wandering, Black-browed and Grey-headed Albatrosses and White-chinned Petrels. The main forms of potential disturbance at breeding sites arise through tourism, predation by rats and mice, destruction of nesting habitat through over-grazing of vegetation by introduced reindeer and trampling by increasing numbers of fur seals. Impact monitoring studies at Albatross Island indicate that fur seals are currently the biggest threat to seabird breeding habitat. Government initiated a rat eradication trial in 2000 and it intends supporting further eradication programmes, including extirpation of reindeer. It monitors tourism activities via a Post-Visit Report database, but on-site management is self-regulatory. Site-specific management plans have yet to be developed. The current ACAP petrel survey is expected to provide the necessary data for appraisal of key breeding locations and development of management strategies.

SGSSI visitor management policy on seabirds and the practicalities of implementation

Richard McKee

Government of South Georgia and the South Sandwich Islands

The Government of South Georgia and the South Sandwich Islands regards the whole of South Georgia as a protected area. Whilst some visitor management policies are tailored specifically to protect ACAP species, the majority of the measures in place are intended to protect all native Flora and Fauna, including Albatross and Petrels. The bulk of visitors arrive on cruise ships and this number is growing annually. This season in excess of 5000 cruise passengers are expected to visit. Many other visitors arrive on yachts, government patrol vessels, BAS ships and warships. All commercial and private vessels are required to apply for a permit to visit, which is issued by the Commissioner. On completion of the visit a Post Visit Report form (PVR) must also be completed and returned. GSGSSI works closely with International Association of Antarctic Tour Operators (IAATO) and this is a key element of the visitor management policy. We recognise that IAATO member vessels are required to maintain high standards, both at sea and when managing passenger landings. This includes limiting numbers of passengers ashore, maintaining a high staff to passenger ratio and observing a strict code of conduct. On this basis only IAATO member cruise ships are permitted to visit the approved landing sites beyond the vicinity of the main administration at KEP / Grytviken. Verbal briefings are an essential aspect of visitor management. All cruise ship passengers must be briefed by their Expedition staff and all other visitors, including those from yachts, warships, expeditions and government vessels receive a thorough briefing from the Government Officer at KEP. From next season this will be augmented by a South Georgia briefing DVD. Landing sites at specially protected rat free areas, where albatross and petrels breed, are the exception and these require special protection and strict codes of conduct. One such site, Albatross Island, has recently been closed in order to reduce disturbance to breeding Wandering Albatross. Prion Island remains open, though a strict code of conduct is enforced. Coupled with this, a boardwalk is planned, which will control the movement of increasing numbers of visitors to this very sensitive site. A code of conduct and special restrictions will also be in place to cover Cape Rosa from next season. The success of this management strategy relies on the professionalism and integrity of IAATO expedition staff. However, if concerns are raised that standards are slipping then GSGSSI would not hesitate to review this policy. New operators with inexperienced Expedition Leaders are required to embark a Government Observer on their first visit. The Post Visit Reporting protocol is vital for monitoring visitor activity and identifying trends and sites where visitor pressure is greatest. Other important areas of concern currently being addressed include naval helicopter flights and the risk of bird strikes on cruise ships. All naval aircrew now receive lowflight avoidance maps and information, as well as being briefed in person by GSGSSI staff prior to their deployment. Cruise ship operators have responded quickly to bird strike incidents, though prevention remains the Government's aim. If the incidents of birdstrike continue, then IAATO operators will be required to ensure that vessels blackout all unnecessary light emissions, avoid specific overnight anchorages as well as having contingency plans in place. Future policy will include more site specific management, follow up surveys of the original baseline survey and expanded use of post visit report data, possibly incorporating it into a more expansive GIS System to help identify any impacts resulting from visitor activity.

At –sea distribution of seabird species in the Falkland Islands from at-sea surveys and satellite tracking.

Tim Reid

Falklands Conservation

Seabirds spend most of their lives at sea. This makes them difficult to study, as we are limited in our ability to gain access to this aspect of their lives. Nevertheless, because this aspect is so important, and the area they encounter most of their threats in, it is important for us to try to gain a greater understanding of their distribution at sea. This can be attempted in a number of ways, including banding and diet studies, but here we are concentrating on the two methods that give the greatest quantity of information, at-sea observations, and satellite tracking. In this talk we will discuss and compare aspects of these two methods, using examples from ACAP species that breed within the Falkland Islands (Black-browed Albatross *Thalassarche melanophris*, Southern Giant Petrel *Macronectes giganteus* and White-chinned Petrel *Procellaria aequinoctialis*). In particular we will cover aspects of the advantages and disadvantages of each method, and when each may be advantageous. We will also look at the advantages of using each method in combination with each other. Advantages and disadvantages will predominantly be discussed in relation to Black-browed Albatrosses, as this is the species with the most information relating to the Falkland Islands. At-sea observations can be more economical to conduct than satellite tracking, give information on a greater range of species, especially those smaller species. Additionally, they provide information from a greater number of populations, and on a greater number of birds from within the population. However they may give less information on aspects of what the observed birds are doing and the length of time individuals spend in each particular area, and it may be unclear where the observed birds are from or what age they are. Thus both forms of census have complementary data, and where possible there are major advantages of combining both forms of census.

Seabird – fishery interactions and the development and initial results of mitigation measures implemented in the trawl fishery.

Paul Brickle

Falkland Islands Government Fisheries Department

Seabird mortality associated with longline fisheries has been well documented and publicised globally and has been highlighted further because of IUU toothfish fishing in the Southern Ocean. This has led to the development of a suite of measures to mitigate seabird deaths and in many fisheries their use has become mandatory. Like longlining, trawling also has the potential to cause injury or mortality in seabirds and the causes of which may vary between fisheries. Although there have been many studies on the interactions between seabird and seal mortalities associated with trawlers it is only recently that these interactions have been studied in the Southern Hemisphere. Previously most studies were concerned with birds colliding with net sonde cables. Since the abolition of net sonde cables there have been few developments in mitigating trawler associated seabird mortality. Recently trawl fisheries in the Kerguelen Islands, South Georgia and the Falkland Islands have highlighted significant incidental mortalities. In 2001, Falklands Conservation's Sea Birds at Sea Team (SAST) documented significant levels of mortality caused by warp strike. Typically seabirds that feed on the by-catch and offal discharged from trawlers may be struck by the warp cable and subsequently dragged underwater, fatally injured and/or drowned. Trawlers in the Falkland Islands do not macerate factory waste before discharging it. Studies suggest that eliminating the discharge of offal and by-catch greatly reduces seabird mortality. This presentation tracks the development of mitigation measures, designed by SAST and FIFD, in the Falkland

Islands from the first estimates of trawler mortality to the trials of emerging mitigation measures and finally to the mandatory use of streamer lines in all Falkland finfish fisheries in July 2004.

Satellite tracking of seabirds from South Georgia: foraging ranges and overlap with fisheries

Richard A. Phillips
British Antarctic Survey

Breeding populations of albatrosses and large petrels are declining faster in the South Atlantic than in any other sector of the Southern Ocean. Incidental mortality in longline and trawl fisheries is considered to be the primary cause of these declines, although for some species the problem may be exacerbated by a large-scale, long-term reduction in marine productivity. The availability of high quality tracking and demographic data is key to determining where and when individuals at different life-history stages (fledgling, prebreeder, breeder, nonbreeder) are most vulnerable to by-catch, and to adequately diagnose the causes of population decline. This talk reviews current knowledge of the at-sea distribution of the seven ACAP species breeding at South Georgia (Wandering, Black-browed, Grey-headed and Light-mantled Albatross, Northern and Southern Giant Petrel, and White-chinned Petrel) in relation to recorded effort in major Southern Ocean longline fisheries. Birds were tracked using satellite-transmitters and, more recently, GPS and GLS (geolocator) loggers, with the last of these an invaluable tool for identifying migration flyways, and major staging and wintering areas. This has revealed moderate to extremely large-scale variation in core foraging areas between different breeding stages (incubation/brood-guard/post-guard), between birds of different sex, from summer to winter, and from year-to-year. This has major conservation implications in terms of likely spatio-temporal variability in rates of by-catch. Notwithstanding the gaps in our knowledge for certain species and groups (particularly fledglings and pre-breeders), we can identify many regions where negative fisheries interactions are likely to take place. Such information is invaluable when engaging with the relevant Regional Fisheries Management Organisations in the hope of encouraging improved mitigation practises.

South Georgia and the South Sandwich Islands: Fisheries associated impacts and mitigation measures in South Georgia fisheries

Gordon Liddle
Operations Manager

There are currently three major fisheries in the South Georgia Maritime Zone: deepwater longlining for Patagonian Toothfish *Dissostichus eleginoides* and pelagic trawling for Mackerel Icefish *Champsocephalus gunnari* and Antarctic Krill *Euphausia superba*. Fishing around South Georgia began in the late 1960's by the pelagic fleet of the then Soviet Union. The main target species was Marbled Rockcod *Notothenia rossii*, although other fish were taken throughout the 1970's mostly by bottom trawls. It can be assumed that there was some associated seabird mortality but it was fish stocks that were more rapidly depleted by the fleet of about 30 to 40 trawlers. Patagonian toothfish were only caught as a by-catch species until the 1988/89 season when they became the target of longliners from the Soviet Union and then other nations. It is believed that albatross and petrel mortality was then very high for a few years. From the early nineties, however, effective mitigation methods were developed for legal longliners and these were adopted as Conservation Measures by CCAMLR. Inspections by Government Fishery Officers and the presence of observers on every vessel ensured that they were used and soon the mortality rates declined. Illegal fishing, however, continued to be a serious problem until 1996 when increased patrolling and three successive arrests and successful prosecutions made it clear that the South Georgia MZ was no longer an easy target.

Since then, the amount of patrolling has again increased and in 1998 work began on other forms of remote surveillance. It remains vital that we maintain our vigilance to ensure IUU fishing is kept to minimal levels. The seabird by-catch in the toothfish fishery is generally described as negligible. The krill fishery also catches very few birds but there have been problems with Icefish trawlers. Work is ongoing to address this and the indications are good. In the meantime a 20 bird per vessel limit has been set by CCAMLR and is upheld by the Government of South Georgia and the South Sandwich Islands (GSGSSI). In general we have three or four vessels in the fishery. The reduction in seabird mortality has only been possible with the co-operation and support, both practical and financial, of the industry. In some cases fishing masters themselves have been instrumental in the development of new techniques. Whilst any seabird mortality is to be avoided, the measures now in place in South Georgia mean that no bird species is being affected at the population level by commercial fishing. It is important to note that the licence revenue from these legal operators is needed to finance patrolling. Without that, IUU vessels would return and destroy both fish stocks and bird populations. The latest research by Sally Poncet and her team shows that numbers of albatross and petrels are, however, still declining on South Georgia. The message is clear; one can develop and implement good mitigation measures for our own waters but to protect these pelagic species we must also address the issues on the high seas.

Seabird by-catch on long-lines at Tristan da Cunha

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Tristan da Cunha is a UK Overseas Territory in the central South Atlantic Ocean. It has a resident population of some 280 people on the main island of Tristan. Fishing is the mainstay of the economy. Until recently, commercial fishing has been largely restricted to the fishery for Tristan Rock-lobster *Jasus tristani*, which has relatively little impact on the island's globally important seabird populations (Ryan 1991). However, there is increasing pressure to diversify fisheries. Licenses have been issued to foreign long-line vessels to target both pelagic and demersal fish species. A previous study, based on limited observer data, suggested that at least the demersal fishery had little impact on seabirds (Glass *et al.* 2000). This paper shows that seabird by-catch data in the demersal fishery may be more significant. Fishery returns for 2003-04 suggest there is little problem, with only 13 Great Shearwaters *Puffinus gravis* reported killed from 2.08 million hooks set. At an average by-catch rate of 0.006 birds per 1,000 hooks, this compares favourably with previous estimates for Tristan waters. Once observers were placed on vessels, the picture was quite different. From January 2005 NG spent two trips as an observer on the same vessel and JPG based on another vessel. During Jan-May 2005 they recorded 650 Great Shearwaters, 3 Sooty Albatrosses *Phoebastria fusca*, 1 Yellow-nosed Albatross *Thalassarche chlororhynchos* and 1 Wandering Albatross *Diomedea exulans* (sensu lato) killed on 1.09 million hooks set. At an average rate of 0.601 birds per 1,000 hooks set, this is 100 times more than that recorded from the fishery log books. Vessel effect was minimal, with by-catch by the same vessel used in all previous fishing averaging 0.675 birds per 1,000 hooks. Part of the difference may be due to the greater seasonal spread in the earlier data; by-catch rates probably decrease in winter, when most Great Shearwaters migrate into the North Atlantic Ocean. However, most by-catch reported in fishery logbooks took place in winter. It seems likely that voluntary reporting greatly underestimates the by-catch of seabirds. The observer data showed clear differences in geographic catch rate. Fishing took place at three different seamounts on all three trips with observers. Most fishing effort took place at RSA seamount (634,000 hooks set) with a by-catch of 0.52 birds per 1,000 hooks; higher than the by-catch at McNish seamount (0.083 birds per 1,000 hooks, based on 169,000 hooks), but lower than

by-catch at the un-named seamount between Tristan and Gough (1.142 birds per 1,000 hooks, based on 272,000 hooks). This suggests that distance from the breeding islands is an important determinant of bycatch for Great Shearwaters during the chick-rearing period.

References

Glass, N., Lavarello, I., Glass, J.P. & Ryan, P.G. 2000. Longline fishing at Tristan da Cunha: impacts on seabirds. *Atlantic Seabirds* 2: 49-56.

Ryan, P.G. 1991. The impact of the commercial lobster fishery on seabirds at the Tristan da Cunha islands, South Atlantic Ocean. *Biol. Conserv.* 57: 339-350.

Seabirds interaction with fisheries in South Africa, Namibia & Angola

Samantha Petersen
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Longline fishing vessels operating in the Benguela ecosystem target hake, tuna, swordfish and sharks. South African longline fisheries set ca 34 million hooks in South African waters and probably kill in the region of 10 000 seabirds each year. South Africa has an effective observer scheme and the by-catch of seabirds has been well documented over the past few years. Although seabird by-catch has decreased over the past few years it still remains unacceptably high and compliance with permit conditions relating to seabird mitigation, remains poor. In Namibia, about 24 longline vessels fish demersally for hake. A further 56 vessels target tuna, swordfish and sharks by means of both longline techniques as well as pole-and-line. Although an observer scheme is in place in Namibia, seabird by-catch data are not reported and the real scale and nature of seabird by-catch remains unknown. Evidence of the impacts of longline fishing on the seabirds of Namibia was revealed when guano scrapers found large numbers of longline hooks within the Cape Gannet *Morus capensis* colony on Ichaboe Island. Also, given that a similar complement of pelagic seabird species occurs off the coast of Namibia compared to the west coast of South Africa and that similar fisheries occur here, it is reasonable to assume that seabird by-catch off Namibia is a problem. Furthermore, the Namibian government has acknowledged to the FAO that it has a seabird by-catch problem in longline fisheries in its waters and has consequently embarked on the process of developing an NPOA-seabirds. As yet, no mitigation measures have been implemented in these fisheries. The longline capacity of Angola is, at present, largely unknown. However Tuna and swordfish are caught by means of longlines within the National EEZ (Tuna and Swordfish Atlas - www.fao.org) mainly by Spanish and Portuguese flagged vessels. Threatened seabirds known to be killed in longline fisheries also occur off the coast of Angola. On a recent cruise on the *F. Nansen* an observer noted fishermen catching Cape Gannets and White-chinned Petrels *Procellaria aequinoctialis* by means of floating handlines, for the pot. Both these species are also vulnerable to longline fishing mortality.

Seabird by-catch and conservation strategies in Brazil

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Until mid 2005, ten species of albatrosses (Diomedidae), 24 of petrels (Procellariidae), five of storm petrels (Hydrobatidae) and one Pelecanoididae were recorded in Brazilian waters. The highest diversity and abundance are found in cold waters and upwelling waters in south-southeast region, especially under Subtropical Convergence influence off Rio Grande do Sul shore, where the

Falklands and Brazilian Currents meet. Data interactions of 20 seabird species with longline fishery are available for this area. Ten seabird species are incidentally caught in fishing hooks, mainly Black-browed Albatross (*Thalassarche melanophris*), Yellow-nosed Albatross (*T. chlororhynchos*), White-chinned Petrel (*Procellaria aequinoctialis*), Spectacled Petrel (*P. conspicillata*), but also Wandering (*Diomedea exulans*), Tristan (*D. dabbenena*), and Northern and Southern Royal Albatross (*D. sanfordi* and *D. epomophora*). This result shows that the southern Brazilian area is important for conservation of birds from four main breeding areas, including South Georgia, Falklands / Malvinas, Tristan da Cunha and New Zealand islands. Data on seabird by-catch were collected by onboard observers during 32 cruises over Brazilian Exclusive Economic Zone and international waters, from 20°S to 40°S and 26°W to 52°W (351 sets and 371,368 hooks) between November 2000 and August 2005. Catch rate (Birds Per Unit Effort: BPUE) was very variable between trips with maximum capture rate in a trip of 2.7 birds/1000 hooks in 2004. An overall BPUE of 0.09 birds/1000 hooks was recorded. Previous reports of BPUE of seabirds from Brazilian fleet were higher with values, of 1.35 birds/1000 hooks in 1991 and 0.095 birds/1000 hooks in 2001. The Brazilian pelagic longline fleet was composed of 129 vessels that deployed 12.6 million hooks in 2002. The domestic fleet increased their effort both in winter and summer when comparing 2002 and 2004, with a similar trend in the leased fleet in winter. During winter both fleets concentrate their activities along the shelf break of southern Brazil where they deployed 2 million and 3.1 million hooks respectively in 2004. The demersal longline fleet comprised 42 vessels in 1997 and 1998 and deployed 17.7 million hooks in 1998. However, the rapid decline of fish stocks caused a concurrent decline of the number of demersal longliners to an unknown, but a small proportion of the late 1990s fleet. As a result of the effort in informing the fishermen about the importance of seabird conservation issues, some captains of domestic vessels based on south-southeast ports applied voluntarily, for at least three years, some mitigation measures, like streamer lines, blue-dyed baits and night setting. Nowadays, these are used very sporadically and monitoring is urgently needed. It is necessary to implement an educational program with the fishermen aimed to inform them about mortality of seabirds and to encourage the fishing industry to adopt mitigation measures. Moreover, to implement the FAO-National Plan of Action-Seabirds is vitally important to supply the government with reliable information to develop specific laws to reduce seabirds by-catch in the near future.

Effect of Black-browed Albatross abundance on the by-catch rate of the Patagonian Toothfish fishery in southern Chile

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Albatross mortality during fishing operations is a worldwide phenomenon found at almost all fisheries evaluated. As fishery impact on populations depends on the net number of birds killed at all fisheries, it is vital to assess all fisheries for which by-catch is suspected to occur. We present the first assessment of the industrial Patagonian Toothfish longline fishery in southern Chile. Data was collected by dedicated scientific observer onboard longliner vessels for the period April 2002-March 2003, a period for which no mitigation measures were in force in Chile. Seabird by-catch rate varied from 0 to 0.929 birds/1000 hooks throughout the year, with a total estimated of 1,855 birds killed during the 2002 fishing season. We found that Black-browed Albatross mortality, comprising 96% of all birds caught, was mainly related to its abundance astern during setting, which has a marked seasonal pattern in southern Chile linked to the different stages of the breeding season. The highest by-catch rates were observed during incubation and brooding, but declined sharply during postguard to ≤ 0.05 birds/ 1,000 hooks. Reduction in albatross presence during setting after brooding is not clear, as the fleet and foraging trips of tracked albatrosses were similar to the brooding stage. It is possible that changes in the attractiveness of fishing vessels for toothfish

in respect of other fisheries occurring in the area during summer may explain this pattern, though behavioral factors linked with each breeding stage cannot be ruled out. The results suggest that using remote tracking devices for inferring albatross interaction levels with fishing effort must be used with caution, considering all potential fisheries in the zone, the breeding stage and the net abundance of birds.

Building a network to evaluate global by-catch

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Duke Center for Marine Conservation

Many seabirds are inadvertently taken as by-catch in global fisheries. Collaborative efforts of scientists and fishermen have led to the development of gear and new fishing practices that have the ability to dramatically reduce seabird by-catch. Despite the encouraging progress in seabird by-catch mitigation, there remain the issues of implementation of these changes and the reduction of by-catch of other vulnerable taxa, namely marine mammals and sea turtles. Assessing and reducing by-catch impacts for all of these taxa is challenging because of how these species migrate through management zones, national and international boundaries, encountering a variety of fishing fleets and gear types along the way. Given limited resources for conservation efforts, a coordinated approach that integrates by-catch mitigation across taxa is warranted. In 2005 Duke University and Blue Ocean Institute initiated the Global By-catch Assessment Project. The objectives of the project are to work collaboratively with scientists worldwide involved in by-catch and mitigation research to identify by-catch hotspots across gear types and taxa groups. Our focus is to develop new tools and approaches to place by-catch assessments into oceanographic and demographic contexts at large spatial scales. We are developing an international network of scientists, managers, and fishermen who are interested in taking a coordinated approach to assess the global by-catch of seabirds, marine mammals, and sea turtles.

FAO National Plans of Action – seabirds

Ben Sullivan

BirdLife International

BirdLife International is a strong supporter of the FAO IPOA-S, but believe that steps need to be taken to ensure its implementation is more robust and uniform. The adoption of the following ‘best practice’ recommendations for NPOA-S would greatly increase its conservation outcomes:

- A thorough assessment should be conducted based on the guidelines provided in IPOA-S and the criteria used to justify the need for a NPOA-S (or not) should be explicitly detailed.
- Where feasible, NPOA-S objectives should be coupled with stringent but realistic targets and timelines (e.g. by-catch goals, level of observer coverage).
- Data collection and methodological protocols associated with NPOA-S initiatives should be transparent and scientifically justifiable.
- Seabird by-catch data and where appropriate, mitigation measure compliance information, should be collected by ensuring an appropriate level of specifically tasked seabird observer coverage.
- All plans should require the adoption of minimum standard mitigation measures (e.g. bird scaring lines, line weighting, seasonal measures).

- Plans should include a combination of mandatory (minimum standard mitigation measures) and voluntary additional mitigation measures for all longline fisheries addressed in a NPOA-S.
- States should optimise the NPOA-S opportunity by addressing seabird by-catch issues in other fisheries (e.g. trawl and gillnet fisheries) as exemplified by the Falkland/Malvinas and New Zealand NPOA-S.

Regional Fishery Management Organisations: Their duties and performance in reducing by-catch of albatrosses and petrels

Cleo Small, Ben Sullivan & John Croxall
BirdLife International

Regional Fisheries Management Organisations (RFMOs), such as the tuna commissions of the Atlantic, Pacific and Indian Oceans, have a central role to play in the sustainable management of the world's oceans. Under the international legal framework for the oceans (such as the Law of the Sea and the United Nations Fish Stocks Agreement), their duties include minimising by-catch in their fisheries, including seabird by-catch. In March 2005, BirdLife International's Global Seabird Programme published an environmental review of RFMOs, particularly in relation to measures undertaken by RFMOs to reduce by-catch of albatrosses and petrels. A few, such as CCAMLR (the Commission for the Conservation of Antarctic Marine Living Resources) have demonstrated how much can be achieved by RFMOs in reducing seabird by-catch. However, others currently have few or no requirements in place for reducing by-catch in their fisheries. The BirdLife Global Seabird Programme is undertaking a programme of work with these RFMOs to advocate addressing seabird by-catch issues within their fisheries. In the South Atlantic, fisheries are managed by CCAMLR, and by ICCAT, the Atlantic tuna commission. ICCAT longline fisheries extend down to 45°S and ICCAT fishing effort between 30-45°S amounts to 30-40 million hooks per year, posing a major risk of seabird by-catch to many albatross and petrel species in the South Atlantic, particularly to those breeding on the Tristan da Cunha island group, and to Black-browed Albatross from South Georgia which migrate towards Southern Africa during the non-breeding period.

CCAMLR: fishery management – the role of RFMOs

John Croxall
British Antarctic Survey

The area of application of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) contains many of the world's most important breeding sites of albatrosses and petrels and much core feeding habitat for these species and for others breeding outside the Convention Area. CCAMLR, which came into force in 1982, is based on three main principles:

- sustainable use of harvestable resources;
- taking full account of the needs of dependent species; and
- prevention of changes potentially irreversible within 30 years.

The management of its main Southern Ocean fisheries is reviewed, in relation to avoidance of adverse impacts on albatrosses and petrels. Current management of the Antarctic Krill *Euphausia superba* fishery has catch limits appropriate for large geographical scales but likely ineffective at the smaller scales at which krill harvesting mainly occurs. However despite potential problems for restricted-range foraging seabirds this is unlikely to create difficulties for krill-eating albatrosses

(notably Black-browed Albatross from South Georgia). The fishery for Mackerel Icefish *Champscephalus gunnari*, essentially confined to the South Georgia continental shelf, is undertaken by midwater trawling. In recent years persistent low-level by-catch of Black-browed Albatross and White-chinned Petrel have been reported, principally entangled and drowned in the net meshes during the set and haul. Considerable efforts to devise ways to reduce this mortality now appear to be having some success using binding of the net at the set and streamer lines and related deterrents on the haul. Once fishing for Antarctic Toothfish *Dissostichus eleginoides* switched from trawling to longlining (at South Georgia during the 1980s) mortality of albatrosses and petrels were reported. As the fishery expanded (both geographically and in fishing effort) crude estimates suggested that several thousand birds were killed annually. Using scientific observers around South Georgia the first reliable estimate was of nearly 6,000 birds killed in 1997. Given the substantial contribution this was likely making to the known population declines of many albatross populations, especially at South Georgia, to the extent of being clearly irreversible, CCAMLR took rapid action. It implemented, in mandatory Conservation Measures, a suite of measures designed to reduce incidental mortality linked to compulsory presence of independent scientific observers on every vessel fishing for toothfish. The mitigation measures involved control of offal discharge, use of streamer lines, extra weighting to sink mainlines faster and setting at night. In addition a closed season, to protect albatrosses and white-chinned petrels when breeding, was introduced around South Georgia. These measures were highly effective, reducing estimated incidental mortality in the South Georgia fishery from 5,755 to 640 to 210 to 21 in successive years. Since 2000 totals have never exceeded 30 birds. As fishers become more expert in using mitigation the opportunity to fish in part of the closed season (under strict catch limits) has become available. Based on risk assessments of all parts of the Convention Area, appropriate mitigation has been developed for each area. Measures are reviewed annually and recent developments have involved use of double streamer lines, experimental fishing after establishing line sink rates using depth recorders, use of integrated weight (IW) line and prohibition on offal discharge in particularly sensitive areas. Remaining problems chiefly involve IUU fishing and fishing in the French EEZs. Over the last 10 years several hundred thousand seabirds were likely killed by IUU fishing in the Convention Area until fishery protection and other measures took effect; even nowadays, however, totals are likely much greater than in the regulated fishery. Longline fishing in the French EEZs around Crozet and Kerguelen was recently revealed to be killing over 12,000 white-chinned petrels annually (in 2002 and 2003). Rapid introduction of CCAMLR measures (especially IW line) to supplement the use of streamer lines reduced levels by 75% but further reduction, without restricting fishing season, may prove difficult. In terms of data collection, analysis and interpretation and implementation of environmental best practice in longline and trawl fisheries, CCAMLR has been a model for other RFMOs; unfortunately it will take some time for the governance, management and levels of environmental awareness of other RFMOs to match those of CCAMLR.

The BirdLife International Global Seabird Programme

Ben Sullivan
BirdLife International

Seabirds travel widely across oceans and between different territorial waters, and spend considerable time in high seas areas, where no national jurisdiction exists, time which makes it essential to address seabird conservation at national, regional and global levels. Consequently in 1997, BirdLife International established a BirdLife Global Seabird Conservation Programme. This programme, international in its nature and scope, operates through a developing alliance of regional task groups, supplemented by close links to BirdLife Partners based in, or closely linked to, each region. The main focus of the programme, exemplified by BirdLife's 'Save the Albatross' campaign, is the seabird mortality caused by by-catch in longline and other fisheries. It is the most

critical conservation problem facing many species of seabirds. BirdLife works across a range of levels: working with fishers to encourage the use of onboard mitigation measures to reduce seabird mortality, and lobbying governments and international organisations to develop and implement appropriate regulatory frameworks and international agreements. We are also the holders of the Global *Procellariiform* Tracking Database, which is a unique and powerful conservation tool for engaging with a range of bodies critical to the seabird conservation, including Regional Fisheries Management Organisations.

4.3 Background documents

Berrow, S.D., A.G. Wood and P.A. Prince (2000) Foraging location and range of White-chinned Petrels *Procellaria aequinoctialis* breeding in the South Atlantic. *Journal of Avian Biology*, 31: 303-311

BirdLife International (2003) Tracking Ocean Wanderers: The global distribution of albatrosses and petrels - Results from the Global Procellariiform Tracking Workshop, 1-5 September, 2003, Gordon's Bay, South Africa. Cambridge, UK: BirdLife International: pp 100

BirdLife International (2005) Contribution to the Development of ACAP Priorities for UK and UK Overseas Territories. BirdLife International: pp 5

Black, A.D. (2005) Seabird and marine mammal distribution in the waters around South Georgia 2002 – 2004. Falklands Conservation: pp 158

Catard, A. (2001) Important Bird Areas in Africa and associated islands - French Southern Territories *In*: Fishpool, L.D.C. and M.I. Evans. *Important Bird Areas in Africa and associated islands*. BirdLife International, 337 - 347

Cooper, J. and P.G. Ryan (1994) Management Plan for the Gough Island Wildlife Reserve. Government of Tristan da Cunha: pp 58

Cooper, J. and P.G. Ryan (2003) South African National Plan of Action for reducing the incidental catch of seabirds in longline fisheries. Marine and Coastal Management Department, Environmental Affairs and Tourism, South Africa: pp 103

Croxall, J.P., J.R.D. Silk, R. A. Phillips, V. Afanasyev and D.R. Briggs (2005) Global circumnavigations: Tracking year-round ranges of non-breeding albatrosses. *Science*, 307: 249-250

Cuthbert, R.J. and E.S. Sommer (2004) Population size and trends in four globally threatened seabirds at Gough Island, South Atlantic Ocean. *Marine Ornithology* 32: 97-103

Douse, A. (2006) Natural Priorities: A Conservation and Biodiversity Strategy for the Falkland Islands. Falkland Islands Government: pp 102

Government of Tristan da Cunha (2006) Conservation of Native organisms and Natural Habitats (Tristan da Cunha) Ordinance 2006. Government of Tristan da Cunha: pp 10

Glass, N. I. Lavarello, J.P. Glass and P.G. Ryan (2000) Long-line fishing at Tristan da Cunha: impacts on seabirds. *Atlantic Seabird* 2: 49-56

Huin, N. (2002) Year round use of the southern oceans by the black-browed albatross breeding in the Falkland Islands. Falklands Conservation: pp 87

Huin, N. (2006) Albatross and penguin census of the Falkland Islands 2005/06. Falklands Conservation: pp 8

Huysen, O. (2001) Important Bird Areas in Africa and associated islands - Bouvetøya (Bouvet Island) *In*: Fishpool, L.D.C. and M.I. Evans. *Important Bird Areas in Africa and associated islands*. BirdLife International, 113 - 115

Lawton, K., G. Robertson, R. Kirkwood, J. Valencia, R. Schlatter and D. Smith (In Press) An estimate of population sizes of burrowing seabirds at the Diego Ramirez archipelago, Chile, using distance sampling and burrow scoping. *Polar Biology*.

Moreno, C. (2005) Chilean national plan of action for reducing the incidental catch of seabirds in longline fisheries (NPOA-S). Universidad Austral de Chile, Valdivia, Chile: pp 23

Munro, G. (2004) Waste discard management in the Falkland Islands trawl fishery: A discussion document. Falklands Conservation: pp 62

Nicholls, D.G., C.J.R. Robertson, P.A. Prince, M.D. Murray, K.J. Walker, G.P. Elliott (2002) Foraging niches of three *Diomedea* albatrosses. *Marine Ecology Progress Series*, 231: 269-277

Otley, H. (2005) Seabird mortality associated with Patagonian toothfish longliners in Falkland Island waters during 2002/03 and 2003/04. Falkland Islands Government: pp 45

Patterson D.L., E.J. Woehler, J.P. Croxall, J. Cooper, S. Poncet and W.R. Fraser (In press) Breeding distribution and population status of the Northern Giant Petrel *Macronectes halli* and the Southern Giant Petrel *M. giganteus*. *Marine Ornithology*,

Phillips, R. A. and J.P. Croxall (2006) At-sea tracking data for albatross and petrels: data gaps in the Atlantic. BirdLife International: pp 5

Phillips, R. A., J.R.D. Silk and J.P. Croxall (2005) Foraging and provisioning strategies of the light-mantled sooty albatross at South Georgia: competition and co-existence with sympatric pelagic predators. *Marine Ecology Progress Series*, 285: 259-270

Phillips, R.A., J.R.D. Silk, B. Phalan, P. Catry and J.P. Croxall (2004) Seasonal sexual segregation in two *Thalassarche* albatross species: competitive exclusion, reproductive role specialization or foraging niche divergence? *Proceedings of the Royal Society of London*, 271: 1283-1291

Phillips, R.A., J.R.D. Silk, J.P. Croxall and V. Afanasyev (2005) Year-round distribution of White-chinned Petrels from South Georgia: Relationships with oceanography and fisheries. *Biological Conservation*, 129: 336-347

Phillips, R.A., J.R.D. Silk, J.P. Croxall, V. Afanasyev and V.J. Bennett (2005) Summer distribution and migration of non-breeding albatrosses: individual consistencies and implications for conservation. *Ecology*, 86 (9): 2386-2396

Poncet, S. (2003) South Georgia land and visitor management report. South Georgia Albatross Surveys: pp 71

Poncet, S., G. Robertson, R.A. Phillips, K. Lawton, B. Phalan, P.N. Trathan and J.P. Croxall (In Press) Status and distribution of wandering, black-browed and grey headed albatrosses breeding at South Georgia. *Polar Biology*.

Projecto Albatroz (2006) Assessing the conservation status of the spectacled petrel. Unpublished report, 31pp.

Reid, T. and N. Huin (2005) Census of the southern giant petrel population of the Falkland Islands 2004/05. Falklands Conservation: pp 25

Ryan, P.G., J. Cooper and J.P. Glass (2001) Population status, breeding biology and conservation of the Tristan albatross *Diomedea [exulans] dabanena*. *Bird Conservation International* 11: 35-48

Ryan P.G. and J.P. Glass (2001) Inaccessible Island Nature Reserve Management Plan. Government of Tristan da Cunha: pp 65

Simpson, B. and J. Hellstrom (2004) Biosecurity for the Falkland Islands. Biosecurity Limited, New Zealand: pp 60

Small, C. (2005) RFMOs: their duties and performance in reducing by-catch of albatrosses and other species. *BirdLife International*: pp 105

Sullivan, B.J. (2004) Falkland Islands FAO National Plan Of Action for reducing incidental catch of seabirds in longline fisheries. *Falklands Conservation*: pp 54

Sullivan, B.J. (2005) Essential elements for NPOA-Seabirds: Best Practice Guidelines. *BirdLife International*: pp 15

Sullivan, B.J., P. Brickle, T. A. Reid, D.G. Bone and D.A.J. Middleton (In Press) Mitigation of seabird mortality on factory trawlers: trials of three devices to reduce warp cable strikes. *Polar Biology*.

Sullivan, B.J., and T. Reid (2003) Seabird mortality and trawlers in Falkland Island waters 2002/03. *Falklands Conservation*: pp 58

Sullivan, B., N. Huin, T. Reid, T. Neves, and R. Warlich (2003) Dispersal of colour marked fledgling black-browed albatross from the Falkland Islands. *Falklands Conservation*: pp 19

Tuck, G.N., T. Polacheck and C.M. Bulman (2002) Spatio-temporal trends of longline fishing effort in the Southern Ocean and implications for seabird by-catch. *Biological Conservation*: 114: 1-27

White, R.W., K.W. Gillon, A.D. Black and J.B. Reid (2000) Vulnerable concentrations of seabirds in Falkland Islands waters. *Joint Nature Conservation Committee*: pp 60

White, R.W., K.W. Gillon, A.D. Black and J.B. Reid (2001) The distribution of seabirds and marine mammals in Falkland Islands waters. *Joint Nature Conservation Committee*: pp 104

White, R.W., J.B. Reid, A.D. Black and K.W. Gillon (1999) Seabird and marine mammal dispersion in the waters around the Falkland Islands 1998-1999. *Joint Nature Conservation Committee*: pp 93

Wood, A.G., B. Naef-Daenzer, P.A. Prince and J.P. Croxall (2000) Quantifying habitat use in satellite-tracked pelagic seabirds: application of kernel estimation to albatross locations. *Journal of Avian Biology*, 31: 278-286

Xavier, J.C., J.P. Croxall, P.N. Trathan and A.G. Wood (2003) Feeding strategies and diets of breeding grey-headed and wandering albatrosses at South Georgia. *Marine Biology*, 143: 221-232

4.4 Workshop sessions: content and responsibilities

4.4.1 Breeding sites (Rapporteurs: Guidicelli, Poncet, Chair Croxall)

- Definition : pragmatic, flexible (easier to combine than sub-divide)
- Protection : nature/implementation of available Protected Area designation
- : identification of most important sites (e.g. IBA approaches)
- Management : plans for main sites (prioritise, funding)
- : actions for threats (known and potential)
- : eradicate alien predators (cats, rats, mice)
- : restore/improve breeding habitat
- : assess habitat modification/destruction (humans, seals)
- : assess disturbance (e.g. tourists)

Review ACAP Breeding Site forms and database proposals
Protection for marine “extensions” from breeding sites (marine IBAs)

4.4.2 Population status and trends (Rapporteurs: Cooper, Reid, Chair Phillips)

- Baseline data requirements (at site/colony level)
- Availability of validated historical data (i.e. for trend analysis)
- Survey requirements (frequency, nature, methods)
- Monitoring requirements (frequency methods)
- Demographic studies (sites, methods)

Review ACAP data and database proposals.

4.4.3 Foraging ranges and areas (Rapporteurs: Huin, Phillips, Chair Petersen)

Data requirements to complete “baseline” knowledge for:

- Annual cycle – breeding
- Annual cycle – non-breeding
- Life-history stages (e.g. fledgling, juvenile, pre-breeders, adult non-breeders)

4.4.4 Fishery-related issues (Rapporteurs: Brickle, Sullivan, Chair Munro)

- Review of South Atlantic by-catch data (current and historical)
- Review of regional NPOAs (Falklands, Brazil, Chile, Uruguay, Tristan)
- By-catch avoidance/mitigation
- By-catch research and development
- By-catch implementation
- Specific threats/solutions from regional fisheries (longline, trawl, squid, industrial)
- RFMOs: general
 - : ICCAT
 - : SEAFO
 - : SWAFC
- Marine Protected Areas

4.4.5 Education and public awareness (Rapporteurs: A. Liddle, Glass, Chair Brown)

Review current initiatives

Consider requirements for specific target audiences and in respect of OT and other constituencies

Decision-makers (governments, government agencies)

General public

Youth

Landowners

Fishery interest (managers, owners, fishers etc.)

4.4.6 Data (synthesis (and prioritisation) of requirements) (Rapporteurs: Riley, Moreno, Chair Baker)

Acquisition

Management

Analysis

Transmission

Dissemination (not publication)

4.4.7 Implementation and resources (Rapporteurs: Cooper, Hall, Riley, Tasker, Chair Croxall)

Resource and implementation requirements for fieldwork programmes

Coordination and responsibilities within OTs

Coordination/collaboration between OTs

Coordination of actions, reporting and representation in conjunction with metropolitan UK

General

ACAP data

Policy issues

Resources

Coordination and collaboration with non-OT stakeholders.

4.5 List of acronyms

ACAP	Agreement on the Conservation of Albatross and Petrels
AP	Action Plan (of ACAP Agreement)
ATCM	Antarctic Treaty Consultative Meeting
BAT	British Antarctic Territory
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
DEFRA	Department of the Environment, Food and Rural Affairs
EEZ	Economic Exclusion Zone
EIA	Environmental Impact Assessment
ESA	Environmentally Sensitive Area
EU	European Union
FAO	Food and Agricultural Organisation of the United Nations
FCO	Foreign Commonwealth Office
FI	Falkland Islands
FIG	Falkland Island Government
GEB	Group of Experts of Birds (SCAR)
GSGSSI	Government of South Georgia and the South Sandwich Islands
GSP	Global Seabird Programme
IAATO	International Association of Antarctic Tour Operators
IBA	Important Bird Area
ICCAT	International Convention on the Conservation of Atlantic Tuna
IUCN	World Conservation Union
IUU	Illegal, Unreported or Unregulated fishing
JNCC	Joint Nature Conservation Committee
KEP	King Edward Point
MOP	Meeting Of Parties
MoU	Memorandum of Understanding
MP	Member of Parliament
NGO	Non-Governmental Organisation
NPOA	National Plan Of Action
OECD	Organisation for Economic Coordination and Development
OT	Overseas Territories
OTEP	Overseas Territories Environment Programme
PVR	Post Visit Report
RFMO	Regional Fishery Management Organisation
SAST	Seabirds At Sea Team
SCAR	Scientific Committee for Antarctic Research
SEAFO	South East Atlantic Fisheries Organisation
SPA	Specially Protected Area
SWAFC	South West Atlantic Fisheries Commission

