

# Guidelines for the implementation of the Agreement on the Conservation of Albatrosses and Petrels (ACAP) at South Georgia and the South Sandwich Islands

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Anton Wolfaardt

ACAP coordinator UK South Atlantic Overseas Territories

Joint Nature Conservation Committee

Darren Christie

Environment Officer

The Government of South Georgia and the South Sandwich Islands

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### For further information please contact:

Anton Wolfaardt  
ACAP coordinator  
UK South Atlantic Overseas Territories  
Joint Nature Conservation Committee  
P.O. Box 585  
Stanley  
Falkland Islands  
FIQQ 1ZZ  
[anton.wolfaardt@jncc.gov.uk](mailto:anton.wolfaardt@jncc.gov.uk)

### OR

Darren Christie  
Environment Officer  
Government of South Georgia and the South Sandwich Islands  
Government House  
Stanley  
Falkland Islands  
FIQQ 1ZZ  
[env@gov.gs](mailto:env@gov.gs)

### Cover Illustration:

Wandering albatrosses (*Diomedea exulans*) at South Georgia.  
Lino-cut by Leigh-Anne Wolfaardt ([www.leighwolfaardt.com](http://www.leighwolfaardt.com))

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*This document serves as a tool to guide the work of the Government of South Georgia and the South Sandwich Islands and is not legally binding.*

## Summary

The Agreement on the Conservation of Albatrosses and Petrels (ACAP) is a recently established (2004) multi-national treaty which seeks to maintain a favourable conservation status for albatrosses and petrels that it lists in Annex 1. The United Kingdom (UK) ratified ACAP in 2004, soon after it came into force, and this ratification has been formally extended to the relevant Overseas Territories, including South Georgia and the South Sandwich Islands. Collectively the UK South Atlantic Overseas Territories are breeding range states for 12 of the 29 species currently listed by the Agreement. The Agreement and its Action Plan describe the actions that Parties are required to implement. The Agreement's Action Plan (Annex 2 of the Agreement) is divided into seven specific but related activities: species conservation, habitat conservation and restoration, management of human activities, research and monitoring, collation of information, education and public awareness, and implementation.

This document (the South Georgia and South Sandwich Islands ACAP Plan) summarises the current status of ACAP-related work at South Georgia and the South Sandwich Islands, and provides guidelines for a prioritised programme of future work. It is intended to serve as a tool to guide and coordinate actions that are required to be undertaken in order to meet the obligations of the Agreement. Each of the main sections of the plan includes a boxed summary of ACAP requirements, which have been drawn from the text of the Agreement and its Action Plan, an overview of current work related to these requirements and a list of recommended actions. A summary of the recommended actions, their priority rating, and key stakeholders is provided in Appendix 1.

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## 1. Introduction

The Agreement on the Conservation of Albatrosses and Petrels (ACAP) came into force in 2004 (Cooper *et al.*, 2006). The main objective of the Agreement is to maintain a favourable conservation status for albatrosses and petrels that it lists in Annex 1 (Anon, 2006). The United Kingdom (UK), including on behalf of its South Atlantic Overseas Territories<sup>1</sup> (SAOTs), ratified the Agreement on the Conservation of Albatrosses and Petrels (ACAP) in 2004, soon after it came into force. The UK SAOTs are particularly important for the conservation of albatrosses and petrels. Collectively, they are breeding range states to 12 of the 29 species covered by the Agreement, three of which are endemic to the UK SAOTs. For most of these, the SAOTs host significant proportions of the global breeding population, and the South Georgia and South Sandwich Islands (SGSSI) are no exception (Table 1).

The ACAP Agreement, together with its Action Plan, describes a number of conservation measures that contracting Parties need to implement to improve the conservation status of these threatened seabirds. A workshop was held in the Falkland Islands in 2006, at which the main tasks and actions required to improve the conservation status of albatrosses and petrels in the South Atlantic were discussed and assessed. Following the workshop, a report was published setting out the objectives and tasks for each of the UK SAOTs (Falklands Conservation, 2006).

This ACAP Plan for SGSSI builds on the 2006 workshop and report, and has been written to meet the ACAP requirements and thus contribute to the ultimate objective of the Agreement, which is to achieve and maintain a favourable conservation status for albatrosses and petrels. Each of the main sections of the plan includes a boxed summary of ACAP requirements, which have been drawn from the text of the Agreement and its Action Plan (AP). It includes information on the current status of ACAP-related work at SGSSI, as well as linkages to the relevant legislation and management plans. A summary of the recommended actions, their priority rating, and funding information is provided in Appendix 1. Although this plan deals specifically with ACAP-listed species, the activities will often respond to wider biodiversity issues, and will be implemented as part of broader programmes. Similarly, the Implementation Plan focuses on SGSSI, but also encourages complementary action in other areas, particularly on the High Seas, and the jurisdictional waters of other countries, where albatrosses and petrels from SGSSI are known or thought likely to be killed. It is important to note that the primary objective of this plan is the conservation of ACAP species and habitats, and it is possible that something which is a low order priority for ACAP species may be a high order priority for other components of the islands' biodiversity.

A number of organisations and individuals undertake ACAP-related work at SGSSI. The main purpose of this plan is to serve as a tool to guide the coordinated and efficient implementation of best-practice actions and work that contributes effectively towards fulfilling the objectives of ACAP.

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<sup>1</sup> Falkland Islands, South Georgia and the South Sandwich Islands, British Antarctic Territory and the Tristan da Cunha group of islands.

## 2. ACAP species

Seven of the 29 currently listed ACAP species breed on South Georgia and South Sandwich Islands (SGSSI). For all of these species, SGSSI hosts significant proportions of the global breeding population, including the largest populations for four of the seven species (Table 1; for a list of the current species included in Annex 1 of ACAP, see Appendix 2). This, together with the unfavourable conservation status and declining populations of most of these species, highlights the significant importance of SGSSI for albatross and petrel conservation.

**Table 1: ACAP-listed species breeding on South Georgia and the South Sandwich Islands, relative size of the population in global terms, and recent (2010) IUCN status and population trends**

Species	Global Importance	IUCN status (2010)	Recent trend
Wandering albatross ( <i>Diomedea exulans</i> )	3 <sup>rd</sup> largest	VU	-4% pa
Light-mantled sooty albatross ( <i>Phoebastria palpebrata</i> )	Largest	NT	Unknown
Grey-headed albatross ( <i>Thalassarche chrysostoma</i> )	Largest	VU	-2% pa
Black-browed albatross ( <i>Thalassarche melanophris</i> )	2 <sup>nd</sup> largest	En	-4% pa
Southern giant petrel ( <i>Macronectes giganteus</i> )	3 <sup>rd</sup> largest	LC	+3% pa
Northern giant petrel ( <i>Macronectes halli</i> )	Largest	LC	+2.3% pa
White-chinned petrel ( <i>Procellaria aequinoctialis</i> )	Largest	VU	-1.8% pa

LC – Least Concern, NT – Near Threatened, VU – Vulnerable, EN - Endangered

## 3. Relevant legislation, conservation listings and plans

Until 1985 SGSSI were administered as dependencies of the Falkland Islands. In 1985 SGSSI became a separate United Kingdom Overseas Territory (*South Georgia and South Sandwich Islands Order 1985*). *The South Georgia and South Sandwich Islands (Territorial Sea) Order 1989* defined the territorial sea as that part of the sea within 12 nautical miles from the islands' coastline. A Maritime Zone of 200 nautical miles from the coastlines of SGSSI was proclaimed in 1993 to enable the conservation and management of the waters, habitats and natural resources of this zone (*Proclamation (Maritime Zone) No. 1 of 1993*). *The Fisheries (Conservation and Management) Ordinance (2000)*, with amendments in 2003 and 2004, provides a framework for the issuing of fishing licences, enforcement and penalties.

The Falkland Islands Dependencies Conservation Ordinance (1975) is in the process of being updated as part of the legislative review being undertaken for the Government of

South Georgia and South Sandwich Islands (GSGSSI). The review process will produce an integrated and all-encompassing legislative framework for the islands, and deal with their overall conservation management in a holistic manner. As part of this process, GSGSSI have recently (May 2010) released the Wildlife and Protected Areas Bill for public comment. Following a review of the comments received, and approval from the Foreign and Commonwealth Office (FCO), this legislation will be formally adopted.

An Environmental Management Plan for South Georgia was first published in 2000 (McIntosh and Walton, 2000). The plan, which provides comprehensive background information on the island and sets out conservation management strategies and policies, has subsequently been revised. The current plan (*South Georgia: Plan for Progress. Managing the Environment. 2006-2010*) is not intended to replace the 2000 version, but to complement it, and covers the five year period 2006-2010 (Pasteur and Walton, 2006). Both these documents state clearly the objectives and policies for the conservation of the indigenous flora and fauna, ecological associations, and natural environment of South Georgia. The South Sandwich Islands are not formally included in these plans, but the GSGSSI apply similar principles in the management of the South Sandwich Islands.

The SGSSI Environment Charter was signed jointly by the GSGSSI and the UK Minister for Overseas Territories in September 2001. The Environment Charter outlines the environmental management commitments of the UK government and the GSGSSI. The Environment Charter serves as a framework policy, and has been used to guide the development of the current management plan and policies at SGSSI.

The management of SGSSI is also informed by a number of International Treaties or Agreements. The most significant of these in relation to ACAP responsibilities include ACAP itself, which was ratified by the UK, including on behalf of the South Atlantic Overseas Territories, in 2004, and CAMLR (*Convention on the Conservation of Antarctic Marine Living Resources*). The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) regulates fisheries activities in the Southern Ocean waters, including around South Georgia, by means of Conservation Measures and resolutions. These include the prescription of seabird bycatch mitigation measures. *The Fisheries (Conservation and Management) Ordinance (2000)* and subsequent amendments give effect to the GSGSSI's obligations under CCAMLR.

#### **4. Breeding sites**

The obligations relating to the conservation of breeding sites encompass broadly the protection and active management of these sites, including the management of non-native species detrimental to albatrosses and petrels, minimising the risk of introducing non-native species, minimising human disturbance associated with tourism and research, and managing breeding site habitats, including the restoration of sites where appropriate.

ACAP's Advisory Committee (AC) has established four Working Groups, including a Breeding Sites Working Group (BSWG), which co-ordinates and drives work associated with

ACAP breeding sites on behalf of the AC. The BSWG has developed a Breeding Sites database for all ACAP-listed species, which will be integrated with other ACAP databases, and be made available via a web-portal.

There has been some debate about what constitutes a breeding site. For consistency and compatibility with other ACAP data (e.g. status and trends data), a hierarchical approach has been used to define each site. In the case of SGSSI, each island is listed as a breeding site, and the mainland is split into seven regions (Appendix 3). The finalisation of a definitive site list is important for the purposes of standardisation and comparisons across different sites or island groups.

**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 and implement 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. Minimise and prevent disturbance from tourists and 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:
  - a. identification of internationally important breeding sites;
  - b. 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;
  - c. reviews of the nature of, coverage by, and effectiveness of, protection arrangements for albatrosses and petrels;
  - d. identification of gaps in information as part of the above reviews, with a view to addressing these in future priorities.
9. 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.

This database also includes a list of threat criteria, which are used to assess the scope (proportion of population affected) and severity (intensity) of threats at each breeding site. The threat criteria are restricted to those affecting ACAP species at the breeding site (i.e. not those occurring at sea), and are only included/assessed if the threat has been documented

in some way at the site in question, and is likely to have a negative impact (population decline in the next decade) on an ACAP species. Potential or suspected threats are thus not included. The list of threats for SGSSI breeding sites is included in Appendix 4. Although the approach of only including documented threats linked to population declines (and excluding potential or suspected threats) may be viewed as insufficiently precautionary, it is the most effective means of ensuring objective assessments of threats across species and sites. The database will be continually updated, so as new evidence comes to light regarding a particular threat, this can be incorporated in the database and re-assessed. Furthermore, one of the actions required from all ACAP Parties by AC5 is the compilation of a list of breeding sites with introduced vertebrates (see below), so even though the mere presence of alien vertebrates may not constitute a threat, their presence at each breeding site will be documented by way of this list, which will be maintained by the BSWG.

#### **4.1 Current status of the management of ACAP breeding sites at South Georgia and South Sandwich Islands**

The aims of the South Georgia Management Plan (2006) are to ‘conserve the native flora and fauna and natural environment of South Georgia; to prevent the further introduction of alien flora and fauna and to eradicate or control previously introduced species that affect or endanger native species or habitats.’

##### **4.1.1 Protection status of ACAP breeding sites and species**

All of South Georgia and the South Sandwich Islands are formally protected, and all visits to the island are managed by means of a permit system. Disturbance, killing, capture or export of native fauna (including all ACAP species) and flora is prohibited. Any exemption to this prohibition requires a special permit from the GSGSSI, and will only be granted for very specific reasons, which can be justified on conservation grounds.

Previously, there were a number of different Protected Area categories used at South Georgia, including Protected Areas, Environmentally Sensitive Areas, Open Areas, and Sites of Special Scientific Interest. In the 2006 Management Plan, these previous categories were reduced to a single category termed Specially Protected Areas (SPAs). SPAs provide a greater level of protection to areas of special conservation or scientific importance, and include areas/islands that are presently free of Norway rats *Rattus norvegicus*, areas out of bounds due to health and safety risks, and important heritage sites. Access to SPAs is prohibited unless a site-specific permit is issued by the GSGSSI. For some of the SPAs, permits will only be issued under exceptional circumstances. Presently the majority of ACAP breeding sites are designated SPAs (see Appendix 3).

The Wildlife and Protected Areas Bill caters for the formal designation of SPAs as well as Specially Protected Species (SPSs). Once designated, Species Action Plans will be drawn up to define the necessary actions to conserve these species and assist in their recovery. The selection of SPSs will be based on a set of objective criteria. The ACAP-listed species would be obvious candidates for this designation, having already been formally identified (under ACAP) as requiring special attention.

#### **4.1.2 Measures to eliminate, control or prevent the introduction of non-native species to breeding sites**

Norway rats were accidentally introduced to South Georgia by sealers about 200 years ago. They are present in many parts of the island, and there is concern that the retreat of glacier fronts, which are thought to serve as barriers, may facilitate the spread of rats to areas where they are currently absent. The main impact of rats on ACAP species is predation of burrow-nesting white-chinned petrels *Procellaria aequinoctialis* (Appendix 4). Rats also cause some damage to the vegetation.

Reindeer *Rangifer tarandus* were introduced to South Georgia by Norwegian whalers as a source of food from the early 20<sup>th</sup> century, and currently occur as two separate herds, one at Barff/Royal Bay, and the other around the Busen Point/Husvik area. The main impact of reindeer on ACAP species is through their trampling and heavy grazing, which negatively impacts the terrestrial biodiversity and ecological integrity of affected areas and thus undermines the quality of nesting habitat for white-chinned petrels and other species. As is the case with rats, it is thought that the receding glacier fronts may facilitate the movement of reindeer into areas which are currently unaffected by their activities.

House mice *Mus musculus* also occur on the island, although their population is small and localised, being restricted to the Nunez Peninsula and the coastline from Shallop Cove to Cape Rosa, both on the south coast. However, recent sightings of house mouse outside of this area suggest that they are likely to be more widespread than previously thought. Although there is no evidence that house mice impact any ACAP species at South Georgia currently, they are known to be a significant threat to albatrosses at Gough Island, where they prey on Tristan albatross chicks. Furthermore, if rats are eradicated from South Georgia, and mice are not removed entirely at the same time (a much more difficult prospect), it is likely that the house mouse population will increase as it is freed from competition and predation. Given the impact of mice on albatrosses and other seabirds at Gough Island, the consequence of mice increasing in number following a rat eradication programme needs to be considered in the formulation of the rat management strategy; an increasing house mouse population will likely reduce the benefits of eradicating rats from South Georgia. Although not an ACAP species, there is anecdotal evidence that mice impact the endemic South Georgia pipit *Anthus antarcticus*, as very few pipits are present in mice-infested areas.

A study to consider the feasibility and implications of a Norway rat eradication programme was completed by the GSGSSI in 2007 (Christie, 2007). This study concluded that given the size of the task, it would be sensible to proceed in a phased approach, carrying out and evaluating a series of trials to determine what is practically possible for the island as a whole. The study also highlighted the importance of having a robust biosecurity regime in place before initiating an eradication programme, and that all islands that are currently rat-free, remain so. In April 2010, the South Georgia Heritage Trust released for comment an Environmental Impact Assessment for the eradication of rodents from the island of South Georgia (South Georgia Heritage Trust, 2009). It is proposed that the eradication programme be undertaken in several phases. The first phase would be the eradication of rats from Thatcher, Mercer and Greene Peninsulas, which will serve as a trial phase, after

which monitoring will be conducted to inform the implementation of the next phases, which would be much larger in scale. An Operational Plan for the implementation of this first phase was released for comment in April 2010 (South Georgia Heritage Trust, 2010). GSGSSI have subsequently given conditional approval for the first phase of the eradication programme to proceed, and it is planned that the fieldwork for this trial phase will commence from mid-February until the end of March 2011.

GSGSSI released a discussion document in July 2010 regarding the future management of reindeer on South Georgia (Christie 2010). The outcomes of the consultation process, which ran from July to September 2010, will be discussed in late September at a meeting with key stakeholders. These discussions will help inform Government policy on how the reindeer are to be managed.

South Georgia Surveys conducted complete island surveys of northern and southern giant petrels in 2005-06 and 2006-07, part of which was to record the GPS co-ordinates for each of the more than 10 000 nest sites recorded together with the presence/absence of introduced mammals at each nest site. The survey revealed that rats had invaded a previously rat-free offshore island some time during the last 20 years. These data will be incorporated into the South Georgia GIS database so that they can be used to update distribution maps for these species and predict possible future population expansions. During this same period, the British Antarctic Survey (BAS) carried out an archipelago-wide survey of active white-chinned petrel burrows (Martin *et al.* 2009), recording the impact of introduced mammals and Antarctic fur seals *Arctocephalus gazella* on their breeding density and distribution. The Norway rat and the reindeer were found to have a limited negative impact on the nesting density and distribution of white-chinned petrels. The increasing population of indigenous Antarctic fur seals have, however, displaced nesting white-chinned petrels from some areas due to their impact on coastal tussac habitat (Sally Poncet, unpubl. data).

GSGSSI have developed and put in place a range of biosecurity measures that are enforced through the permitting system. These protocols apply to all vessels landing passengers, crew, expedition staff, research and management staff and supplies at South Georgia, and outline steps for proper inspection of cargo, including its packing and consolidation prior to departing Stanley. All vessels landing passengers or cargo have to complete a self-audit checklist and a declaration of compliance with all the biosecurity requirements at every landing site on the island so as to prevent the risk of intra-island transfer of non-native species or contaminants/propagules. GSGSSI have recently completed an assessment of the biosecurity risk of importing cargo to the islands. A bespoke biosecurity facility was formally established at King Edward Point in early 2010, and is used to store biosecurity materials, and for the temporary storage and inspection of incoming cargo. The range of biosecurity measures already in place are being formally taken up in the GSGSSI legislative review currently underway, and will thus have legislative power once the new conservation legislation is enacted.

#### **4.1.3 Measures to minimise disturbance at ACAP breeding sites**

All visits to SGSSI are strictly managed. The Government's visitor policy is to encourage responsible tourism to South Georgia, so as to increase awareness of the global importance

of the islands, and generate revenue to improve the environmental management of the islands, whilst ensuring that any disturbance to wildlife is minimised. Tourist landings may only be made at one of the approved tourist landing sites, and after a permit has been granted by GSGSSI. Landing sites that are SPAs require an additional application and permit. GSGSSI may, at their discretion, require an approved observer on vessels, particularly on those that are visiting for the first time, to ensure that the required standards are being met. GSGSSI work closely with the International Association of Antarctic Tour Operators (IAATO), and expects all visitors to adhere to the standards detailed in the IAATO bylaws and guidelines. GSGSSI previously commissioned a survey to assess compliance of tourists and tour operators with prescribed policies and conditions for visits to South Georgia. Results from this survey were used to provide feedback to IAATO and the tourist industry.. A number of additional mechanisms are used by GSGSSI to manage tourism. These include:

- *Post-visit reports* – required from all cruise ships, yachts, expeditions and military vessels and helicopters for all visits outside Grytviken/King Edward Point and Bird Island.
- *Control of visitor numbers* – the GSGSSI reserves the right to restrict the overall number of visitor numbers if necessary.
- *Closure of landing sites* – if required, the GSGSSI will close landing sites to tourists. For example, Albatross Island, a previous tourist landing site, has been closed to tourists since the 2004/05 season because of observations and concern about disturbance caused to nesting albatrosses. Other sites, such as Prion Island, are temporarily closed to avoid disturbance during the fur seal breeding season (November to January), which coincides with the egg-laying and early incubation period of wandering albatrosses at this site.
- *Research permits*.
- *Flight avoidance map and briefing* (which detail areas where low flying is prohibited) for all aircraft permitted to fly at South Georgia; aircraft operations are generally not permitted at South Georgia, except when there is an agreed operational requirement, e.g. for management, scientific or military purposes.
- *Site-specific Visitor Management Plans* – in the process of being developed for each landing site; many are already completed and available on the GSGSSI website.

GSGSSI have erected a boardwalk at Prion Island to manage visitor impacts on the local flora and fauna, including nesting wandering albatross, southern giant petrels and burrowing petrels. GSGSSI is also contributing funding for annual surveys and monitoring of albatrosses and petrels at Albatross and Prion islands, including the monitoring of visitor impacts (at Prion Island) and the impact of Antarctic fur seals on ACAP and other species. This work is being carried out by South Georgia Surveys.

## **4.2 Recommendations**

- 4.2.1** Finalise formal list of ACAP breeding sites for South Georgia. This includes the need to define additional sites/areas for the more dispersed ACAP species (e.g. giant petrels, light-mantled sooty albatross and white-chinned petrel).

- 4.2.2** Ensure that ACAP breeding sites are spatially depicted in the South Georgia Geographical Information System (GIS). This should be done initially by using the best available spatial data (i.e. finest resolution) for each species/breeding site (ranging from the centre point to a colony to detailed boundaries of colonies, where available). Thereafter, investigate the feasibility and need to map more accurately the distribution and spatial extent of breeding sites or colonies which form part of these breeding sites.
- 4.2.3** Investigate the designation of additional ACAP breeding sites as SPAs.
- 4.2.4** Initiate and implement a process to develop Species and Habitat Management Plans for ACAP species. It is important to note that for some ACAP species – giant petrels, white-chinned petrels and light-mantled sooty albatrosses - it will be very difficult, if not impossible, to delineate easily a breeding site. Consequently, Species Management Plans that could be used to inform site-specific plans may be the best mechanism for these and potentially the other ACAP species.
- 4.2.5** Continue to support and strictly manage tourism activities at SGSSI.
- 4.2.6** Maintain, monitor and strengthen the current biosecurity policy preventing the introduction of pests and diseases, especially in respect of rodents and avian diseases, to and within South Georgia. Implement and review the monitoring protocols to check compliance with biosecurity prescriptions. Review provisions at the sites from which vessels and/or cargo transshipping to SGSSI are moored/stored, including the relevant onshore installations, especially those at Stanley.
- 4.2.7** Develop and implement contingency plans that set out rapid response remedial actions that should be implemented in the event of the introduction of an alien species or disease outbreak.
- 4.2.8** Maintain formal monitoring programme of potential visitor and Antarctic fur seal impacts on breeding seabirds at Albatross and Prion islands (Albatross Island is currently closed to tourists, and serves as a control site in monitoring visitor impacts).
- 4.2.9** Formulate a policy and action plan for the management of reindeer at South Georgia.
- 4.2.10** Ensure a coordinated approach to the management of alien mammals at South Georgia, in which all three all three alien mammal species are considered holistically, prioritising and scheduling/ordering the required actions and steps in the process (e.g. immediate priority is to ensure that areas currently free of alien mammals remain so, then phased approach to dealing with other species in a systematic manner).
- 4.2.11** Compile and maintain a list indicating the presence or otherwise of alien mammals at all ACAP breeding sites, the current status (eradicated or extant), the year of the eradication, whether it was deliberate, the method used, whether an eradication campaign is being planned, the proposed methods, and an indicative year (ACAP reporting requirement).
- 4.2.12** Compile and maintain a list of islands from which ACAP species are known to have bred in the past, but have since been extirpated, to include the relevant island characteristics (location, size, presence of alien mammals etc) and, if documented, the peak number of breeding pairs and year, year

of last breeding attempt, and the likely reasons why breeding no longer takes place. (ACAP reporting requirement).

## 5. Status and trends of populations

The UK has an obligation to monitor the status and trends of ACAP-listed species breeding at each of its Overseas Territories, and thus contribute to the overall assessments of the conservation status of each species.

### **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. Prepare the UK report to the ACAP 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 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.

ACAP's *Status and Trend Working Group* (STWG) is responsible for collecting, collating and updating demographic and population data for each ACAP-listed species and to produce assessments of the status and trends of each species. The STWG, together with the other ACAP Working Groups, has developed a relational database that integrates and curates status and trends, breeding sites and taxonomy data. In addition to facilitating the coordinated storage and management of these data, the database is also used for the ACAP Species Assessments; the framework for which is built in to the ACAP database. The ACAP Species Assessments aim to collate the most recent scientific information on population status and trends, distribution, threats, as well as any conservation measures that are in place for the 29 albatross and petrel species currently listed under the Agreement. The usefulness of the ACAP database as a management tool is dependent on the timely provision of updated data from the breeding range states (or data holders) to the STWG so that it can be incorporated into the database and used in analyses. The information collated in the database can also be used for the purposes of education and public awareness. These data and species assessments will be made available through the data portal on the ACAP website. The Species Assessments are available online (<http://www.acap.aq/acap-species>), and will be routinely updated as new material becomes available.

BirdLife International maintains the IUCN Red List for Birds (updating this annually), and, in the Data Zone of its website, Species Factsheets for all globally threatened species (<http://www.birdlife.org/datazone/index.html>). These are valuable tools and are consulted (and the data contained therein used) extensively by scientists, managers and the general public. It is important to ensure that the factsheets of all UK SAOT ACAP species are

reviewed annually for accuracy, and that proposals relevant to changes in the IUCN conservation status are initiated, disseminated, or responded to, as appropriate.

## **5.1 Current activities relating to monitoring the status and trends of ACAP-listed species at South Georgia and South Sandwich Islands**

When considering the monitoring of ACAP listed species, it is useful to distinguish between annual monitoring of study plots and intermittent much larger-scale censuses of entire islands or archipelagos. Both forms of monitoring take place at South Georgia. The bulk of the demographic monitoring is conducted by BAS at Bird Island, complemented by monitoring work at Albatross and Prion islands by South Georgia Surveys. No recent censuses or monitoring work have been carried out on southern giant petrels at the South Sandwich Islands (the only ACAP species breeding there).

### **5.1.1 Censuses of populations**

Archipelago-wide (i.e. complete) surveys of the breeding populations of all ACAP-listed species at South Georgia, except light-mantled sooty albatrosses, have been conducted in the last five years by South Georgia Surveys, the British Antarctic Survey (BAS) and other co-workers. These include wandering, black-browed and grey-headed albatrosses in 2003/04 (Poncet *et al.*, 2006), southern and northern giant petrels and white-chinned petrels (Martin *et al.*, 2009) in 2005/06 and 2006/07.

Whole-island counts of intended decadal nature were initiated by BAS at Bird Island in 1976/77 and repeated in 1989/90 for black-browed albatross and grey-headed albatross (the latter also involving counts in 1977/78 and 1990/91 to take better account of the demipopulations in this species (Prince *et al.*, 1994). Most of the large colonies of each species at Bird Island have been counted at five yearly intervals since the mid 1970s (Croxall *et al.*, 1998, Prince *et al.*, 1994). BAS currently conducts annual surveys of nesting wandering albatrosses at Bird Island, and undertakes decadal counts of the whole of Bird Island for nesting black-browed and grey-headed albatrosses and southern and northern giant petrels.

South Georgia Surveys conducts annual monitoring of breeding numbers of wandering and light-mantled sooty albatrosses and northern and southern giant petrels at Albatross (from two study areas) and Prion Islands. There are very low numbers of nesting light-mantled sooty albatrosses on Albatross and Prion islands, much less than the 40-50 pairs considered necessary to determine accurately the population trend – see below. Consequently, continued monitoring of these populations is likely not worth the effort.

### **5.1.2 Monitoring of study plots**

BAS conducts comprehensive annual demographic studies at Bird Island of banded birds to determine adult and juvenile survival rates, individual reproductive success and population trends for wandering, black-browed and grey-headed albatrosses (1975/76-present), northern and southern giant petrels (2000/01-present), as well as annual monitoring of population trends and productivity for light-mantled sooty albatrosses (2002/03-present).

BAS have recently (2007/08) re-started a programme to monitor, once every five years, white-chinned petrel population trends from study plots at Bird Island.

In addition to the annual counts of all wandering albatross nests at Albatross and Prion islands (see above), South Georgia Surveys monitors productivity of all nests at Prion Island (1998/99-2002/03, 2005/06-present). This work is also used to monitor potential tourism impacts at Prion Island and fur seal impacts at Prion and Albatross islands. Monitoring plots for white-chinned petrel were set up at Prion Island, Husvik, Corral Bay and Maiviken by South Georgia Surveys in December 2006, and checked again in January 2008. The aim of this monitoring is to monitor population trends and productivity of white-chinned petrels at sites with and without introduced mammals (rats and reindeer). However, the work has not continued beyond January 2008, and the future funding and capacity for this work remains uncertain.

## **5.2 Recommendations**

The monitoring of the status and trends of ACAP-listed species at South Georgia and South Sandwich Islands is important to determine if management measures are achieving their objectives. The monitoring strategy should ideally include a combination of annual monitoring of breeding numbers (one survey during incubation) and productivity (one chick count shortly before fledging) of representative (selected) study colonies, comprehensive demographic studies at a sample of study colonies to assess adult and juvenile survival, recruitment and other demographic parameters that help identify the underlying causes of population trends, and complete archipelago censuses much less frequently – once every 10 years. Because ACAP species are long-lived, for monitoring programmes to contribute useful information on the status and trends of ACAP species and possible reasons for population changes, they need to be of a long-term nature. For certain species (light-mantled sooty albatross, southern and northern giant petrels and white-chinned petrel), intensive monitoring is problematic due to logistical challenges and/or the sensitivity of the species – including nesting habitat - to disturbance. The monitoring strategy for South Georgia should be to maintain the current monitoring effort (complete archipelago censuses once every 10 years and population monitoring of selected/representative sites annually or once every five years), identify and fill current gaps, and institute additional demographic studies if monitoring of population trends at sites away from Bird Island indicate a more rapid decline than shown at Bird Island.

### **Wandering albatross**

- 5.2.1** Maintain annual monitoring of population trends and demography at Bird Island
- 5.2.2** Maintain annual monitoring of breeding numbers at Albatross and Prion islands and productivity at Prion Island.
- 5.2.3** Conduct an archipelago-wide census once every 10 years.
- 5.2.4** If monitoring of population trends at any of the sites away from Bird Island (Albatross or Prion) indicates more rapidly declining populations than at Bird Island, consider initiating a second long-term demographic study to diagnose

the underlying causes of the population change. This could involve banding (metal bands and alphanumeric Darvic plastic rings, which are easier and faster to read) all wandering albatrosses at Prion Island, so that they can be monitored on an annual basis to assess survival, breeding frequency and success, to complement the study at Bird Island. It is important to note that this would be dependent on the monitoring programme at Prion Island continuing for at least the next eight years, and preferably longer. If a second banding programme and long-term demographic study is deemed necessary, Prion Island is considered a better site than Albatross Island, because it is easier to access, and the vegetation/habitat is not as susceptible to disturbance.

### **Black-browed albatross**

- 5.2.5** Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island.
- 5.2.6** Design and implement photo-survey monitoring of population trends at selected (representative) colonies on a five-yearly basis. Also investigate the involvement of passengers aboard cruise-liners in photo-survey monitoring. This will require the development of protocols, and formally engaging with the IAATO. Initially, this should be tested in a pilot study with selected cruise leaders to determine the feasibility of such an approach and the reliability of the results.
- 5.2.7** Conduct an archipelago-wide census once every 10 years. If the five-yearly census proposed in 5.2.6 is sufficiently representative, an archipelago-wide census every 10 years may not be necessary.
- 5.2.8** If monitoring of population trends at any of the sites away from Bird Island indicates more rapidly declining populations elsewhere, initiate a second long-term demographic study to diagnose the underlying causes of the population change.

### **Grey-headed albatross**

- 5.2.9** Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island.
- 5.2.10** Design and implement photo-survey monitoring of population trends at selected (representative) colonies on a five-yearly basis. Also investigate the involvement of passengers aboard cruise ships in photo-survey monitoring. This will require the development of protocols, and formally engaging with the IAATO. Initially, this should be tested in a pilot study with selected cruise leaders to determine the feasibility of such an approach and the reliability of the results.
- 5.2.11** Conduct an archipelago-wide census once every 10 years. If the five-yearly census proposed in 5.2.10 is sufficiently representative, an archipelago-wide census every 10 years may not be necessary.
- 5.2.12** If monitoring of population trends at any of the sites away from Bird Island indicates more rapidly declining populations elsewhere, initiate a second long-

term demographic study to diagnose the underlying causes of the population change.

### **Light-mantled sooty albatross**

- 5.2.13** Maintain annual monitoring of population trends and productivity at Bird Island.
- 5.2.14** Investigate the use of additional sites for annual monitoring of population size and breeding success. Based on the substantial annual fluctuation in numbers within the study area at Bird Island, a minimum of 40 – 50 nests would need to be monitored to determine a reliable long-term trend. This is unlikely to be achievable for sites that are currently visited on a regular basis. Alternatively, identify sites that could be feasibly censused about every five years.
- 5.2.15** Investigate methods for an archipelago-wide census to assess overall population size, and carry out census.

### **Northern giant petrel**

- 5.2.16** Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island.
- 5.2.17** Maintain annual monitoring of population trends at Albatross (from study plots) and Prion islands (whole island)
- 5.2.18** If monitoring of population trends indicates that the Albatross and Prion island populations differ from the Bird Island population, consider initiating a second long term demographic study.

### **Southern giant petrel**

- 5.2.19** Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island.
- 5.2.20** Maintain annual monitoring of population trends at Albatross and Prion islands.
- 5.2.21** If monitoring of population trends indicates that the Albatross and Prion island populations differ from the Bird Island population, consider initiating a second long term demographic study.
- 5.2.22** Conduct a census of populations at the South Sandwich Islands.

### **White-chinned petrel**

- 5.2.23** Maintain monitoring of population trends at Bird Island every five years.
- 5.2.24** Expand the Bird Island monitoring protocols to several other sites, ideally including sites with and without introduced mammals to monitor their impact on white-chinned petrels. Prion Island, Husvik, Coral Bay and Maiviken have been set up as long-term monitoring sites by South Georgia Surveys. Funding is required to continue the monitoring work. One possibility is to include the Husvik site in the BAS higher predator monitoring study.

## **All species**

- 5.2.25** Together with other relevant OTs and UK experts, ensure that, for all UK SAOT ACAP species, the Species Factsheets are maintained by BirdLife International as part of the IUCN Red List process.

## **6. Foraging range and areas**

Albatrosses and petrels face a range of threats, both on land and at-sea. Chief amongst these is at-sea fisheries related mortality. It is important to acquire data on foraging ranges and key foraging areas within these ranges for all ACAP species so that the spatial and temporal overlap between the distribution of these species and fishing effort can be assessed, and used to inform the better management of seabird-fisheries interactions.

The Global Procellariiform Tracking Database, developed and maintained by BirdLife International as a repository for all albatross and petrel tracking data, is an important international tool for the conservation of albatrosses and petrels (BirdLife International, 2004). All researchers collecting albatross and petrel tracking data are encouraged to contribute these data to the database so that they can be used for regional analyses. BirdLife International and others have already used these data for a range of conservation purposes, especially relating to assessments for Regional Fishery Management Organisations (RFMOs), demonstrating its value as an important conservation tool. It should be noted that access to these data is subject to the approval by the dataholders.

### **6.1 Current work on foraging ecology at South Georgia and the South Sandwich Islands**

Over the years, BAS has been at the forefront in the development and implementation of a diverse range of foraging ecology research (tracking of at-sea distribution and activity, provisioning rates, diet assessment by conventional means and stable isotopes). This work has been carried out on all seven of South Georgia's ACAP species, tracking individuals throughout the year (i.e. during the breeding and non-breeding seasons). This work forms part of the ongoing BAS research programme at Bird Island. Although not all species are tracked every year, BAS are continuously using and supplementing their long-term tracking archive to investigate at-sea distribution, habitat preference, overlap with fisheries and other foraging parameters. All processed tracking data for ACAP species are submitted routinely by BAS to the Global Procellariiform Database. These data have already been used in a range of regional assessments of seabird-fisheries interactions, especially in the tuna RFMOs.

BAS have recently initiated a study (funded by South Georgia Heritage Trust) investigating the distribution of seabirds around South Georgia, using at-sea survey and tracking data. The aim of the project is to identify and understand the oceanographic and biological drivers of seabird distribution (e.g. bathymetry, oceanographic and fishing effort), and to investigate the possibility of identifying and delineating foraging hotspots that should be the subject of special protection and management intervention.

**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. Develop and implement measures to prevent, remove, minimise or mitigate the adverse effects of activities that may influence the conservation status of albatrosses and petrels (at sea). These include appropriate use of environmental impact assessment (Art III 1c; AP 3.1).
4. Initiate or support research into the effective conservation of albatrosses and petrels (at sea) (Art III 1d).
5. Contribute to the UK report to the Secretariat (to Advisory Committee and 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) reviews to characterise, on the best available evidence, the foraging range (and principal feeding areas within this range) and migration routes and patterns, of populations of albatrosses and petrels;
  - b) reviews of data on the distribution and seasonality of fishing effort in fisheries which affect albatrosses and petrels;
  - c) identification of information gaps as part of the above reviews, with a view to addressing these in future priorities.

With funding from OTEP, a study was initiated by BAS and GSGSSI in 2010 to undertake survey work at sea to determine the spatial overlap between the winter krill fishery and the distribution of foraging predators and fish larvae in South Georgia waters. The project, which will be implemented over two years, focuses on the potential interactions between higher predators, such as marine mammals and seabirds, and the krill fishery at South Georgia, as well as the possible interactions this fishery may have with other fish stock through the by-catch of larval fish. It forms part of a larger programme of marine studies that will lead to the establishment of Marine Protected Areas (MPAs) in the South Georgia Maritime Zone.

No tracking work on southern giant petrels has taken place at the South Sandwich Islands, and whilst it would be useful to obtain tracking data, there are logistical challenges associated with such work.

## **6.2 Recommendations**

- 6.2.1** Tabulate the existing tracking data by stage of breeding cycle (prelaying exodus, incubation, brooding, chick-rearing) and status (sex, breeding/nonbreeding adult, juvenile, fledgling etc) and site for all seven ACAP species breeding at South Georgia, so that the gaps can be more readily appreciated.
- 6.2.2** Continue BAS remote-tracking programme, systematically updating and filling gaps in a prioritised manner. Juveniles and pre-breeders of all ACAP species

are especially important given their particular vulnerability to incidental fisheries mortality.

- 6.2.3** Identify possible spatial gaps in the tracking data (i.e. sites other than Bird Island where tracking would be useful), and attempt to fill these if considered priorities. It is likely that birds in the north-west of the island are similar in their foraging ecology to birds at Bird Island. However, black-browed albatrosses from the south-east of South Georgia may well be foraging in different areas compared with those from Bird Island, and this would be useful to investigate.
- 6.2.4** Ensure all tracking data are submitted to the Global Procellariiform Tracking Database.
- 6.2.5** Seek opportunities (BAS) to collaborate with researchers and institutions involved with tracking work on ACAP species at other sites and thus contribute to regional and global assessments and/or reviews of albatross and petrel distribution and overlap with fisheries.
- 6.2.6** Implement study to investigate oceanographic and biological drivers of seabird distribution around South Georgia, and identify foraging hotspots, and use results to provide management recommendations.
- 6.2.7** Design and implement a wider diet sampling programme. This could be based on the protocols outlined in Phillips (2006). This method involves inducing regurgitation by chicks immediately after they have been fed, and was tested on black-browed and grey-headed albatrosses at Bird Island, South Georgia, without any deleterious impacts on the subsequent survival or fledging mass of chicks sampled. BAS monitor diet of black-browed and grey-headed albatrosses annually, and of wandering albatross and white-chinned petrel intermittently, as part of dedicated studies at Bird Island. A wider diet sampling programme would provide information on the extent to which albatrosses and petrels elsewhere include and rely on discards and offal in their diet, as opposed to natural prey. The methods are relatively simple and do not pose the risk of nest desertion by adults. Routine sampling (30 samples once every three years per species) could be built into existing monitoring initiatives. This is likely to be of greater relevance to other UK Overseas Territories where there are no existing diet sampling programmes. Full implementation should be preceded and informed by a pilot study.

## **7. Fishery-related issues**

The management of seabird-fisheries interactions, particularly the reduction of incidental mortality of seabirds in longline and trawl fisheries, is a critical component of ACAP. The waters around South Georgia are especially important for albatrosses and petrels, with colonies at approximately 50 locations on mainland South Georgia and the offshore islands. Given the wide-ranging nature of albatrosses and petrels, fisheries activities outside of waters managed by GSGSSI pose a significant threat to South Georgia birds, particularly during migration and when not breeding. The management of these threats – both on the high seas and in the jurisdictional waters of other nations - requires concerted international action.

ACAP's *Seabird Bycatch Working Group* (SBWG) works together with ACAP Parties to assess reduce and mitigate negative interactions between fisheries activities and albatrosses and petrels. The overall aims of the SBWG are to identify actions that will assist in assessment, mitigation and reduction of negative interactions between fishing operations and albatrosses and petrels, and to develop technical information and products to assist Parties, Regional Fisheries Management Organisations (RFMOs) and other relevant international and national bodies to reduce seabird bycatch.

**ACAP requirements:  
Fishery related issues**

1. Develop management plans for important areas at sea (AP 2.3.2).
2. Ensure sustainability of marine living resources that provide food for albatrosses and petrels (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:
  - a. identification and assessment of known and suspected threats affecting albatrosses and petrels [at sea];
  - b. identification of existing and new methods by which these threats may be avoided or mitigated;
  - c. reviews, and updating on a regular basis, of data on the mortality of albatrosses and petrels in, *inter alia*, commercial, and other relevant fisheries;
  - d. reviews of data on the distribution and seasonality of effort in fisheries which affect albatrosses and petrels;
  - e. reviews of the nature of, coverage by, and effectiveness of, protection arrangements for albatrosses and petrels [at sea].

The SBWG has undertaken work to develop a strategy for the Agreement and Parties to engage and assist RFMOs and other relevant bodies to assess and minimise bycatch of albatrosses and petrels. At the most recent Advisory Committee meeting (AC4), it was decided that the proposed approach of appointing RFMO Coordinators to coordinate ACAP

engagement at each RFMO meeting would be pursued in a step-wise manner. In the first phase, the RFMO Coordinator approach will be trialled in four RFMOs: the Indian Ocean Tuna Commission (IOTC), Inter-American Tropical Tuna Commission (IATTC), ICCAT and the Western and Central Pacific Fisheries Commission (WCPFC).

### **7.1 Current status of fisheries-related issues at South Georgia and the South Sandwich Islands**

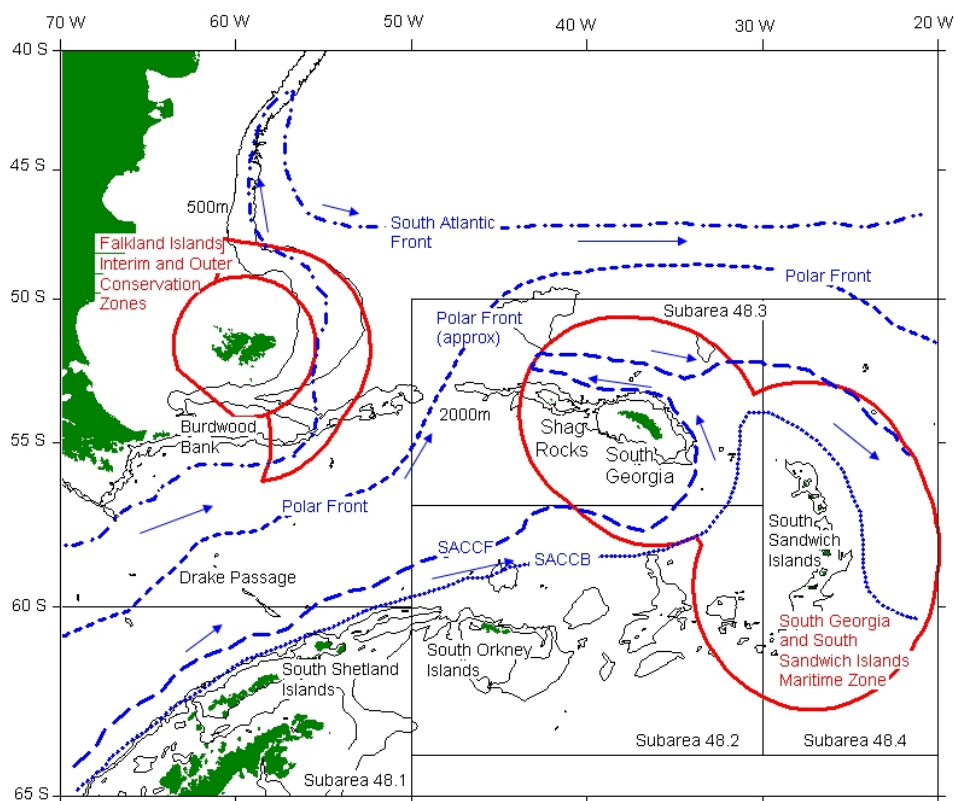
A territorial sea of 12 nautical miles around South Georgia and South Sandwich Islands has been enforced since 1989 by *The South Georgia and South Sandwich Islands (Territorial Sea) Order 1989*. In response to the development of an unregulated fishery in waters beyond the 12 nautical mile territorial zone, and as a conservation measure to support the implementation of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), a Maritime Zone of 200 nautical miles was proclaimed around South Georgia and South Sandwich Islands in 1993.

The fisheries around South Georgia and the South Sandwich Islands are regulated by two interrelated fisheries management regimes, nationally by the GSGSSI, and internationally by CCAMLR. The main aim of the GSGSSI fisheries policy is to '*manage sustainable fisheries in the Maritime Zone using an ecosystem approach and to conserve the marine environment.*' (Pasteur and Walton, 2006). The area covered by CCAMLR is divided into a number of different management units, or 'statistical areas'. The Maritime Zone around South Georgia and the South Sandwich Islands falls within CCAMLR Subareas 48.3 (South Georgia), 48.4 (South Sandwich Islands), and extends slightly into Subarea 48.2 (Figure 1). No fishing activity currently takes place in south of 60°S in 48.4 (Varty *et al.*, 2008).

The sustainable management of SGSSI fisheries is supported by fisheries research carried out on behalf of GSGSSI by two organisations: BAS and the Marine Resources Assessment Group (MRAG) of Imperial College. MRAG provides advice to GSGSSI on fisheries assessment and management issues and also oversees the scientific observer scheme, whilst BAS carries out applied fisheries research on commercial species at King Edward Point. Data from this research are supplied to MRAG for stock assessment analysis and population modelling, the results of which are used by CCAMLR to inform the setting of fisheries catch limits.

CCAMLR conducts a risk assessment of all fisheries to minimise the deleterious effects of fisheries activities on seabirds, and assigns a risk rating for each Subarea (Vaugh *et al.*, 2008). Subarea 48.3 currently has a risk rating of five (SC-CAMLR, 2008), the highest on the scale, and one which requires strict compliance with a number of legally binding seabird bycatch Conservation Measures. Compliance with these measures is monitored by a combination of CCAMLR observers, GSGSSI fisheries observers and GSGSSI officers. Subareas 48.2 and 48.4 have risk ratings of four (average to high) and three (average) respectively (SC-CAMLR, 2008).

Seabird bycatch rates in the Patagonian toothfish fishery around South Georgia have been reduced from unacceptably high levels in the mid 1990s (an estimated 5755 seabirds were killed in Subarea 48.3 in 1997 alone) to zero in 2006 and 2007 (Varty *et al.*, 2008). This remarkable achievement is due largely to the prescription by CCAMLR of a range of mandatory technical and operational bycatch mitigation methods that have been implemented, and in some cases further strengthened, by the GSGSSI, with co-operation and support from the fishing industry. These mitigation measures include the closure of Subarea 48.3 for fishing between September and April each year (the breeding season for albatrosses and petrels at South Georgia), a suite of prescribed technical mitigation measures, and an international scheme of on-board scientific observers. GSGSSI has introduced stricter observer requirements than is prescribed by CCAMLR by requiring all vessels fishing for Antarctic krill *Euphausia superba* to have an international or GSGSSI observer for at least part of the period the vessel is fishing in the GSGSSI's jurisdictional waters.



**Figure 1: Location of the South Georgia and South Sandwich Islands Maritime Zone in relation to the CCAMLR Subareas**

Illegal, Unregulated and Unreported (IUU) fishing was a serious problem in the South Georgia Maritime Zone (Subarea 48.3) until about 1996, when increased patrolling and a number of successful arrests of IUU vessels signalled the intention of the GSGSSI to vigorously deter IUU fishing. GSGSSI charts a dedicated fishery patrol vessel, the *Pharos SG*, which patrols the Maritime Zone throughout the year.

In 2004, following an assessment of the regulated fishery and the likelihood of IUU fishing in the South Georgia Maritime Zone, the South Georgia toothfish fishery was certified by the Marine Stewardship Council (MSC), as a well managed and sustainable fishery; it is currently the only toothfish fishery in the world to have received MSC accreditation.

BirdLife International has recently (2008) completed an IPOA-S assessment (on behalf of GSGSSI) of the seabird bycatch associated with the Patagonian toothfish, *Dissostichus eleginoides*, mackerel icefish *Champsocephalus gunnari* and Antarctic krill fisheries around SGSSI (Varty *et al.*, 2008). The assessment confirmed previous findings that seabird bycatch in all three fisheries is negligible, and that there is consequently no need currently to develop NPOA-S for these fisheries. However, a number of recommendations were provided in the report to maintain and reduce even further the low levels of seabird bycatch. These include investigating methods of mitigating haul bycatch more effectively (in both longline and trawl fisheries), investigating the incidence and origin of discarded longline hooks, quantifying more explicitly the effectiveness of net-binding and the incidence of seabird strikes with trawl warp cables (Varty *et al.*, 2008). The report highlights that the reduction of seabird bycatch in the toothfish fishery around South Georgia provides a model of best practice in seabird bycatch management of use to other fisheries and administrations.

In spite of the ongoing successes in reducing seabird bycatch within the SGSSI Maritime Zone to negligible levels, many of the South Georgia albatross and petrel populations continue to decline. Indeed, South Georgia currently includes some of the most rapidly declining albatross populations in the world (Varty *et al.*, 2008). The sustained declines of South Georgia's albatross and petrel populations have almost certainly resulted from incidental mortality in longline and trawl fisheries operating outside of the region, particularly during migration and when not breeding. Consequently, the main conservation challenges for albatrosses and petrels breeding at SGSSI relate to reducing seabird bycatch outside of the SGSSI Maritime Zone (especially as a result of IUU fishing in other parts of the CCAMLR area) and particularly outside of the CCAMLR region.

On the basis of the degree of overlap between seabirds and RFMO fisheries and the characteristics of species that are known or likely to be caught in these fisheries, the International Commission for the Conservation of Atlantic Tunas (ICCAT) is one of the most important RFMOs (outside of CCAMLR) for albatrosses and petrels from South Georgia and other South Atlantic colonies. GSGSSI is not a member of ICCAT. However, it is clear that significant numbers of at least some of the ACAP species breeding at South Georgia are caught in ICCAT fisheries. Consequently, it is important that linkages are maintained (through joined-up action with the UK Government) with ICCAT (and other relevant RFMOs) to ensure the adoption and implementation of measures necessary to reduce seabird bycatch.

Scientists from BAS, the CSIRO and BirdLife International have recently completed an assessment of the impact of ICCAT fisheries on seabirds. The assessment was presented at a meeting of the ICCAT Sub-committee on Ecosystems (SC-ECO) in June 2009. On the basis of this work, the committee concluded that ICCAT fisheries have measurable impacts on some seabird populations, including several that are threatened with extinction, and that

minimizing seabird mortality in ICCAT fisheries should result in improved population status and reduced conservation concerns. The committee consequently recommended that the existing ICCAT rules on the use of mitigation methods be strengthened to include a wider suite of cost-effective measures that, if properly applied, are known to reduce levels of bird bycatch. The committee also recognised that the ability to assess and monitor impacts of fisheries on seabird populations was severely hampered by low levels of observer coverage and thus inadequate bycatch reporting, and so recommended much more extensive and rigorous information on seabird bycatch rates be collected. These recommendations were not subsequently adopted by the Commission, the decision-making body of ICCAT, due to opposition from Japan. Efforts are continuing to build support for stronger seabird bycatch mitigation measures, and the SC-ECO of ICCAT again recommended at its meeting in June 2010 that more effective seabird bycatch mitigation measures are required.

SGSSI policy for the prevention of marine pollution is based on Annex IV (Prevention of Marine Pollution) of the Environmental Protocol to the Antarctic Treaty, and all vessels in the SGSSI Maritime Zone have to comply with MARPOL regulations. Compliance is monitored by a combination of CCAMLR observers, South Georgia fisheries observers, and GSGSSI officers. GSGSSI is presently investigating the possibility of limiting the transport and use of heavy fuel oil in SGSSI waters, and the extent to which this could be included in the revised conservation legislation. The number of passengers allowed onboard vessels visiting SGSSI is currently restricted to 500. The aim of this policy is to restrict the size of vessels in SGSSI waters and thus reduce the extent and severity of potential impacts, such as oil spillage, should an accident occur.

Monitoring of marine debris and fishing gear associated with seabird nests and adults has been carried out annually by BAS scientists at Bird Island since 1993/1994. A recent analysis of these data indicated that, owing to their wide foraging range and larger gape, wandering albatrosses were the seabird species most affected by discarded fishing gear, especially hooks, which are ingested, and consumed or regurgitated (Phillips et al. 2010).

## **7.2 Recommendations**

A multi-pronged approach is required to eliminate or minimise bycatch of SGSSI albatrosses and petrels. Firstly, it is important that GSGSSI and CCAMLR maintain rigorous management and monitoring of the various fisheries within Subarea 48.3 and the entire CCAMLR area to ensure full compliance with conservation and other measures and so prevent increases in bycatch levels. Because most mortality is now taking place outside of the CCAMLR area, it is especially important that organisations and countries responsible for fisheries management in these areas are encouraged and assisted to reduce and ultimately eliminate seabird bycatch. In this respect, the success of the CCAMLR model can be used as a case study of effective adaptive management of the seabird bycatch problem.

- 7.2.1** UK with other EU ACAP Parties (France, Spain) to seek to ensure better engagement by European Commission in environmental issues relating to external fisheries, especially to address the matter of seabird-fisheries interactions and seabird bycatch mitigation in RFMOs.

- 7.2.2** UK to include seabird bycatch expertise at priority RFMO meetings (or at least engage experts prior to and following relevant meetings).
- 7.2.3** UK to investigate involvement in the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) RFMO, on environmental (seabird bycatch) grounds.
- 7.2.4** UK to participate actively in ACAP RFMO coordinator approach, which will be piloted in IOTC, IATTC, ICCAT and WCPFC. In this approach, an RFMO coordinator will work with ACAP Parties and Advisory Committee officials to develop an ACAP-agreed engagement strategy for each RFMO meeting. Of these pilot RFMOs, ICCAT is of particular importance for birds from South Georgia and the rest of the South Atlantic. It is important to note that GSGSSI is not a member of ICCAT, but linkages (through the UK Government) to RFMOs, such as ICCAT are important for GSGSSI due to the migratory nature of ACAP species.
- 7.2.5** Use results of the ICCAT seabird risk assessment study to develop an influencing strategy aimed at reducing/eliminating seabird bycatch by the use of a suite of appropriate mitigation measures and an effective observer scheme in ICCAT fisheries. Coordinate with other ACAP parties as envisaged in the ACAP-RFMO interaction plan.
- 7.2.6** UK to seek to ensure that other ACAP Parties/Range States (such as Brazil, Uruguay and South Africa) support or initiate measures to reduce seabird bycatch within relevant RFMOs.
- 7.2.7** Collaborate with other countries/organisations to help reduce bycatch (sharing of expertise and advice) and IUU fishing in areas outside of the SGSSI Maritime Zone and the CCAMLR Convention area.
- 7.2.8** Work with fishing companies that operate in SGSSI and CCAMLR waters to ensure that successful mitigation of seabird bycatch by their vessels in these waters is complemented by the same measures when these and other vessels operate in other areas where there are risks of seabird bycatch.
- 7.2.9** Work with fishing companies operating in adjacent South Atlantic waters to encourage proper implementation of seabird bycatch measures. Companies fishing in the High Seas of the SW Atlantic, embarking from the Falkland Islands, provide an opportunity for such engagement.
- 7.2.10** Encourage and support initiatives by industry, governments and RFMOs to combat IUU fishing.
- 7.2.11** Ensure that the seabird bycatch reporting requirements of ACAP are met (new protocols are currently being developed). Determine the most efficient method of obtaining the relevant data from CCAMLR (where all SGSSI bycatch and observer data are held) for ACAP reporting purposes.
- 7.2.12** UK to work with other ACAP Parties (and EU members) to improve bycatch data collection and reporting by ICCAT, and all other relevant RFMOs of which the UK/EC are members or associated parties.
- 7.2.13** UK to work with other ACAP parties that are EU members (Spain and France) to ensure that relevant EC fisheries bycatch data from areas outside of CCAMLR are collected and submitted to ACAP.
- 7.2.14** Collect longline hooks and snoods from albatross nests at Bird Island to ascertain their origin if possible (but noting that gear used in different demersal

longline fisheries is very similar). Use this information to engage with CCAMLR, and South American fisheries in particular on the issue of discarding longline hooks.

## **8. Data acquisition and management**

ACAP requires Parties to cooperate in the development and implementation of systems for collecting, analysing and curating a range of data, as well as exchanging information. The ACAP Working Groups have developed databases for breeding sites and status and trend data, and most recently a relational database to curate and coordinate data from all the ACAP Working Groups. The centralised storage and management of these data is a requirement of the Action Plan of the Agreement, and enables regular monitoring and review of the collective success of Parties in addressing the objective of the Agreement (i.e. to achieve and maintain a favourable conservation status for albatrosses and petrels). These data and information are also used for the compilation of Species Assessments, and for education and public awareness purposes.

The ACAP Action Plan requires the Advisory Committee to review and update regularly data on mortality of albatrosses and petrels in commercial fisheries (Action Plan 5.1 (f)). It is envisaged that the bycatch trends for ACAP species will serve as a performance indicator of the Agreement. Consequently, Parties will be required to submit these data, in a standardised manner, to the SBWG as part of their annual reporting. At the fourth meeting of the Advisory Committee (AC4), it was agreed that prior to the Parties submitting seabird bycatch data, a step-wise process needs to be followed to determine the precise purpose and objective for the data collection, what data Parties are currently collecting, and finally develop and test a prototype bycatch data collection form with comprehensive instructions for its use.

### **8.1 Current status of ACAP data management at South Georgia and South Sandwich Islands**

The current list of ACAP breeding sites for SGSSI is made up of 46 separate sites, 39 of which comprise islands or island groups, and the remaining seven comprise the different regions of the mainland of South Georgia (Appendix 3). The compilation of this list was based on recent and historical survey data together with local knowledge of the area, and was developed by Sally Poncet of South Georgia Surveys and Richard Phillips of BAS. This process also included the formal assessment of ACAP threat criteria for all SGSSI breeding sites, the results of which appear in Appendix 4. Most of the historical and present breeding site and status and trend data on albatrosses and petrels at SGSSI have and continue to be collected by BAS (mostly at Bird Island, but also as part of archipelago-wide censuses) and South Georgia Surveys. The BAS data are curated in the BAS database, and the relevant (updated) data are submitted to ACAP on a regular basis. BAS have also collected a large volume of tracking and foraging ecology data from albatrosses and petrels at Bird Island, which are maintained in their tracking database. All processed tracking data are submitted to the BirdLife Global Procellariiform Database on a regular basis.

**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. Collaborate to 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;
  - b) reviews, and updating on a regular basis, of data on the mortality of albatrosses and petrels in, *inter alia*, commercial, and other relevant fisheries;
  - c) reviews of data on the distribution and seasonality of effort in fisheries which affect albatrosses and petrels;
  - d) 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; identification of gaps in information as part of the above reviews, with a view to addressing these as future priorities.

South Georgia Surveys data are maintained by Sally Poncet, and have also been submitted to BAS (for archiving) and ACAP. The recent census data for southern and northern giant petrels and white-chinned petrels are still in the process of being written up by South Georgia Surveys and BAS, respectively, after which time they will be incorporated into the ACAP database. During the recent (2005-2007) census of giant petrels at South Georgia, each nest site position was recorded with a handheld GPS, together with a suite of other site-specific data. These included breeding site characteristics (e.g. nesting habitats, vegetation communities), potential threats (e.g. human visitation, reindeer and fur-seal impacts) and the presence of introduced mammals (rats, mice and/or reindeer). During the same survey, a number of broader habitat features were also mapped (e.g. vegetation boundaries, ice-free coastal areas, areas with dense tussock cover). All of these spatial data have been collected in a manner that ensures compatibility with the recently completed South Georgia Geographical Information System, commissioned by GSGSSI and developed by BAS Mapping and Geographic Information Centre (MAGIC).

The GIS is intended to be a spatial management tool, a component of which is available online to the public to learn more about the geography and environment of South Georgia. The databases within the GIS are now used by GSGSSI as the central storage mechanism for all environmental and cultural-historical data of South Georgia. Much of the albatross and petrel data collected by BAS and South Georgia Surveys have already been incorporated into the South Georgia GIS.

MRAG manage the scientific observer programme on behalf of GSGSSI. All relevant fisheries-related data (fishing effort, observer coverage, seabird-fisheries interactions) are maintained by MRAG, and provided to CCAMLR on an annual basis and/or as required.

Project Atlantis maintains, on behalf of GSGSSI, an online bibliographic database of research publications of relevance to SGSSI, including links to Abstracts ([http://www.sgpublications.gs/index.php?title=Main\\_Page](http://www.sgpublications.gs/index.php?title=Main_Page)).

## **8.2 Recommendations**

- 8.2.1** Ensure all historical and recent data on albatrosses and petrels (together with associated habitat data) are incorporated into the South Georgia GIS, and that future (updated) data are submitted routinely.
- 8.2.2** Write up of formal protocols for the collection and curation/management of population status and trends and breeding sites management and threat data to ensure that methods are standardised and compatible with the South Georgia GIS (Sally Poncet has already produced a draft document on wildlife and habitat survey protocols, that provides a useful template for the ongoing collection of such data, whether it is part of a routine monitoring programme or of an opportunistic nature).
- 8.2.3** Ensure that updated population status and trends and breeding site management data are submitted to ACAP on a regular (ideally annual) basis.
- 8.2.4** Request that all researchers (data holders) conducting research and monitoring activities on albatrosses and petrels at SGSSI make this information available to GSGSSI for inclusion in the GSGSSI GIS (i.e. for management purposes) and for use by ACAP, subject to the ACAP rules for accessing and using such data, and intellectual property rights.
- 8.2.5** Ensure that the seabird bycatch reporting requirements of ACAP are met (new protocols are currently being developed). Determine the most efficient method of obtaining the relevant data from CCAMLR (where all SGSSI bycatch and observer data are held) for ACAP reporting purposes.
- 8.2.6** Maintain the bibliographic database of published research (scientific papers and reports) carried out at SGSSI.

## **9. Education and awareness**

Dissemination of information and targeted training and awareness programmes are crucial to promote and support the objectives of ACAP. It is also important that efforts in this area are coordinated, and that information, lessons learnt and experience are exchanged and shared between ACAP Parties and other target audiences to maximise the benefits of education and awareness building initiatives.

## 9.1 Current status of education and awareness work at South Georgia and South Sandwich Islands

As there is no resident population, education and awareness initiatives are targeted at visitors (including temporary research and management staff) and fishers. An Environmental Management Plan was published in 2000, followed by a revision in 2006, which complements the 2000 plan. The 2006 'Plan for Progress' is available on the GSGSSI website ([www.sgisland.gs](http://www.sgisland.gs)). The website is constantly updated with information, reports and news stories, and contains a wealth of resources aimed at increasing general awareness of the importance of South Georgia, as well as providing guidelines and information for those visiting the islands (e.g. site-specific visitor management plans, biosecurity requirements etc). One of the most recent additions is the South Georgia GIS, which is available online as a visualisation tool, enabling the public to make use of an interactive map with information about a broad range of physical and biological features, including the distribution of distinct albatross and petrel colonies.

### 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 subregional 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:
  - a) reviews of education and information programmes aimed at conserving albatrosses and petrels.

Staff members of GSGSSI deliver annual presentations to IAATO on tourist management policies, and also hold an annual fisheries science meeting with industry representatives. A book on South Georgia fisheries including issues of seabird conservation was published in 2004 (Agnew, 2004). A visitor's guide to South Georgia, which highlights the key

conservation issues, was published in 2005 (Poncet and Crosbie, 2005), and is made available to all visitors. MRAG are responsible for the fisheries observer programme at SGSSI, and carry out comprehensive training programmes and workshops for prospective observers.

The BAS website ([www.antarctica.ac.uk](http://www.antarctica.ac.uk)) provides general information about South Georgia and Bird Island, as well as updated details of research programmes and findings, which feature regularly in the UK press, and in high-profile scientific journals. South Georgia Surveys maintains a website ([www.southgeorgiasurveys.org](http://www.southgeorgiasurveys.org)) with information about its research and monitoring programmes, including the monitoring work at Albatross and Prion islands. Public awareness of, appreciation and support for SGSSI and their conservation values are further promoted by the South Georgia Heritage Trust ([www.sght.org](http://www.sght.org)), the South Georgia Association ([www.southgeorgiaassociation.org](http://www.southgeorgiaassociation.org)), educational films, media coverage, exhibitions and books.

## **9.2 Recommendations**

- 9.2.1** Promote the objectives of ACAP through the fora and mechanisms available (e.g. website, meetings); identify additional mechanisms to disseminate information.
- 9.2.2** Maintain the profile of South Georgia and the South Sandwich Islands as critical sites for the conservation of albatrosses and petrels, and of the work that is being undertaken to address the range of threats at SGSSI and elsewhere.
- 9.2.3** Collaborate with other Parties and organisations in the development and implementation of regional and international education and awareness programmes.
- 9.2.4** Share expertise and collaborate with other South Atlantic Overseas Territories and other countries whose jurisdictional waters are important for South Atlantic albatrosses and petrels (Chile, Argentina, Uruguay, Brazil, South Africa and Namibia) to encourage conservation (principally bycatch mitigation) of albatrosses and petrels in these areas.

## **10. Monitoring and review**

The progress of this Implementation Plan should be reviewed annually to ensure continued communication among parties and ongoing assessment of the efficacy of actions directed at addressing threats. This will allow the Implementation Plan to be updated in response to review results, and for further refinement of actions and priorities, thus ensuring an adaptive management approach. In addition to formally reviewing the progress of the Implementation Plan, the annual review process will also be used for parties to provide feedback on their ACAP-related activities. Ideally, the review process should take place prior to ACAP Advisory Committee meetings, allowing enough time to collate the necessary information and prepare the UK ACAP Implementation Report.

Given the range of individuals and organisations involved in ACAP-related work at SGSSI, the review process will be conducted via email. It is proposed that the UK SAOT ACAP coordinator draft a template for the annual review, solicit the necessary inputs from stakeholders to draft a review annually, together with representatives of GSGSSI, which will be circulated to all stakeholders for further inputs and finalisation. A comprehensive review of the Implementation Plan should be carried out once every five years.

## 10.1 Recommendations

- 10.1.1 Develop a standardised template for the annual review of the Implementation Plan that links with the progress indicators being developed by ACAP, and conduct annual review of plan, with inputs from all stakeholders.

## 11. Responsibilities, funding and prioritisation

A range of organisations and individuals undertake ACAP-related work at SGSSI. This plan covers the full range of ACAP work and serves to ensure that this work is properly integrated. GSGSSI, together with Central Government in the UK, have overall responsibility for meeting the ACAP objectives. GSGSSI will never have sufficient resources to carry out (or fund) all of the actions listed in this plan themselves. A distinction is made in Appendix 1 between three different types of actions and funding:

- 1) Actions which form part of core ongoing Government work; funded by GSGSSI (**GSGSSI core work**).
- 2) Project work contracted (and currently funded) by the GSGSSI (**GSGSSI project funding**).
- 3) External work – these are actions/projects, which GSGSSI cannot fund themselves, but which have been identified as important actions for which external funding and implementation would be encouraged and supported (**External funding**).

Priority ratings (**High, Medium, Low**) for actions in Appendix 1 are based on the following principles:

- a) links to the UK's main formal obligations of reporting to ACAP should be afforded High priority;
- b) the main focus now should be on species of worst conservation status and on actions most likely to promote improvements to conservation status;
- c) the need to focus on at-sea issues as these are the most important, the most difficult and will likely take the longest;
- d) Data and information compilation and related exercises should not be afforded High priority, unless directly related to a) above or are an essential precursor for crucial conservation action.

It is important to note that the primary objective of this plan is the conservation of ACAP species and habitats, and it is possible that something which is a Low order priority for ACAP species may be a High order priority for other components of the islands' biodiversity.

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### 13. Glossary of acronyms

AC	Advisory Committee of ACAP
ACAP	Agreement on the Conservation of Albatrosses and Petrels
BAS	British Antarctic Survey
BSWG	Breeding Sites Working Group of ACAP's Advisory Committee
CAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CSIRO	Commonwealth Scientific and Industrial Research Organisation
Defra	UK Department for Environment, Food and Rural Affairs
FCO	British Foreign and Commonwealth Office
GSGSSI	Government of South Georgia and South Sandwich Islands
IAATO	International Association of Antarctic Tour Operators
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
IPOA-S	International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (recent guidelines have extended this to cover also trawl and potentially gillnet fisheries)
IUU	Illegal, Unreported and Unregulated (fishing)
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee, UK
RSPB	Royal Society for the Protection of Birds
OTEP	Overseas Territories Environment Programme
RFMO	Regional Fisheries Management Organisation
SAOT	South Atlantic Overseas Territories
SBWG	Seabird Bycatch Working Group of ACAP's Advisory Committee
SGSSI	South Georgia and the South Sandwich Islands
STWG	Status and Trends Working Group of ACAP's Advisory Committee
WCPFC	Western and Central Pacific Fisheries Commission

**Appendix 1: Summary of recommended actions, priority ratings, scheduling and possible funding arrangements for the South Georgia and South Sandwich Islands ACAP Implementation Plan. See section 11 for more information on how the Priority ratings and Funding categories were derived**

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
<b>4.</b>	<b>Breeding Sites</b>				
4.2.1	Finalise formal list of ACAP breeding sites for South Georgia. This includes the need to define additional sites/areas for the more dispersed ACAP species (e.g. giant petrels, light-mantled sooty albatross and white-chinned petrel)	MEDIUM	2010-2011	GSGSSI Core Work	The current list divides the main island into seven regions and treats all the offshore islands separately. Need to determine whether it is useful and possible to include additional breeding sites for ACAP species at South Georgia, especially on the main island, and for the more dispersed ACAP species, such as the giant petrels (fairly easy), light-mantled sooty albatross (not easy) and white-chinned petrel (difficult)
4.2.2	Ensure that ACAP breeding sites are spatially depicted in the South Georgia Geographical Information System (GIS).	MEDIUM	2010-2011, then ongoing as further data are collected	GSGSSI Core Work	This should be done initially by using the best available spatial data (i.e. finest resolution) for each species/breeding site). Make sure that all spatial data currently available has been incorporated into the GIS. For example, during the 2003/04 albatross survey, South Georgia Surveys recorded GPS data for wandering albatrosses that should be incorporated into the GIS. Thereafter, investigate the feasibility and need to map more accurately the distribution and spatial extent of breeding sites or colonies which form part of these breeding sites
4.2.3	Investigate the designation of additional ACAP breeding sites as SPAs	MEDIUM	2010-2011	GSGSSI Core Work	Once enacted, the Wildlife and Protected Areas Bill will enable GSGSSI to designate new SPAs. It would be useful at this point to determine whether any ACAP breeding sites would benefit from the additional protection afforded by being an SPA

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
4.2.4	Initiate and implement a process to develop Species and Habitat Management Plans for ACAP species.	MEDIUM-HIGH	2010-2011 and ongoing	GSGSSI Core Work	One of the aims of the draft GSGSSI strategy is to develop management plans for key species and habitats to ensure that any biodiversity loss is minimised. ACAP species would be ideal candidates. It is important to note that for some ACAP species – giant petrels, white-chinned petrels and light-mantled sooty albatrosses - it will be very difficult, if not impossible, to delineate easily a breeding site. Consequently, Species Management Plans that could be used to inform site-specific plans may be the best mechanism for these and potentially the other ACAP species
4.2.5	Continue to support and strictly manage tourism and other human activities at SGSSI	MEDIUM	Ongoing,	GSGSSI Core Work	
4.2.6	Maintain, monitor and strengthen the current biosecurity policy preventing the introduction of pests and diseases, especially in respect of rodents (HIGH) and avian diseases (MEDIUM), to and within SGSSI. Develop and implement a monitoring programme to check compliance with biosecurity prescriptions (MEDIUM). Review provisions at the sites from which vessels and/or cargo transhipping to SGSSI are moored, including the relevant onshore installations, especially at Stanley (HIGH).	MEDIUM-HIGH (see details in Action column)	2010 and ongoing	GSGSSI Core Work	Biosecurity policy and prescriptions already in place. Need to complete and include formal monitoring process
4.2.7	Develop and implement contingency plans that set out rapid response remedial actions to be implemented in the event of the introduction of an alien species (HIGH) or disease outbreak (LOW-MEDIUM)	LOW-MEDIUM to HIGH (see detail in Action column)	2010-11 and ongoing	GSGSSI Core Work	Contingency Plans not yet in place. Should also be considered for oil pollution events
4.2.8	Maintain formal monitoring programme of potential visitor and Antarctic fur seal impacts on breeding seabirds at Albatross and Prion islands	HIGH	In progress, need to secure long-term funding	GSGSSI Project Funding	Albatross Island is currently closed to tourists, and serves as a control site in monitoring visitor impacts. This forms part of a broader monitoring programme at Albatross and Prion islands, which has funding (£20k per annum) up until 2010. Need to secure funding beyond 2010

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
4.2.9	Formulate a policy and action plan for the management of reindeers at South Georgia.  <i>*Although this may not be considered a High Priority action for ACAP species, it is considered here in the broader context of environmental management of South Georgia</i>	HIGH*	2010	GSGSSI Core Work	The management of reindeer at South Georgia is important for terrestrial conservation generally, and also has an influence on the viability of eradicating rats in areas where both species are present. A policy and action plan is therefore urgently needed. GSGSSI has recently drafted a consultation document on the management of reindeer at South Georgia (2010), which will be made available for public comment
4.2.10	Ensure a coordinated approach to the management of alien mammals at South Georgia.  <i>*Although this may not be considered a High Priority action for ACAP species, it is considered here in the broader context of environmental management of South Georgia</i>	HIGH*	2010 and ongoing	GSGSSI Core Work	The current (2006) Management Plan includes policies for rat and reindeer removal. More recently, SGHT have received conditional approval to proceed with Phase 1 of their rodent eradication programme. Phase 2 is partly dependent on the removal of reindeer, hence the need for a coordinated approach to alien mammal management at South Georgia
4.2.11	Compile and maintain a list indicating the presence or otherwise of alien mammals at all ACAP breeding sites	HIGH	2010 and ongoing	GSGSSI Core Work	Include information about the current status (eradicated or extant), the year of the eradication, whether it was deliberate, the method used, whether an eradication campaign is being planned, the proposed methods, and an indicative year. This information was provided for the recent ACAP meeting (AC5), and is an ACAP reporting requirement
4.2.12	Compile and maintain a list of islands from which ACAP species are known to have bred in the past, but have since been extirpated	MEDIUM	2010 and ongoing	GSGSSI Core Work	To include the relevant island characteristics (location, size, presence of alien mammals etc) and, if documented, the peak number of breeding pairs and year, year of last breeding attempt, and the likely reasons why breeding no longer takes place. This information was provided for the recent ACAP meeting (AC5), and is an ACAP reporting requirement
5.	<b>Status and Trends</b>				
	<b>Wandering albatross</b>				
5.2.1	Maintain annual monitoring of population trends and demography at Bird Island	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
5.2.2	Maintain annual monitoring of breeding numbers at Albatross and Prion islands and productivity at Prion Island (see also 5.2.4)	HIGH	In progress, need to secure long-term funding to ensure continuation of work	GSGSSI Project Funding	Funding available (£20k per annum) up until 2010. Need to secure longer-term funding to continue beyond this point. Includes monitoring of potential visitor and fur-seal impacts
5.2.3	Conduct an archipelago-wide census once every 10 years	HIGH	Once every 10 years; next census due in 2014	External Funding	Use methodology employed in previous census
5.2.4	If monitoring of population trends at any of the sites away from Bird Island (Albatross or Prion) indicates more rapidly declining populations elsewhere, initiate a second long-term demographic study to diagnose the underlying causes of the population change	MEDIUM	Depends on monitoring results. Could be done as part of the Albatross and Prion Island monitoring programme	External Funding. Possible GSGSSI Project Funding	Would entail banding (metal bands and alphanumeric darvics, which are easier and faster to read) all wandering albatrosses at a study colony so that they can be monitored on an annual basis to assess survival and breeding rates, and complement the study at Bird Island
<b>Black-browed albatross</b>					
5.2.5	Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme
5.2.6	Design and implement photo-survey monitoring of population trends at selected (representative) colonies on a five-yearly basis. Also investigate the involvement of passengers aboard cruise-liners in photo-survey monitoring. This will require the development of protocols, and formally engaging with the cruise-line industry. Initially, this should be tested in a pilot study with selected cruise leaders to determine the feasibility of such an approach and the reliability of the results	MEDIUM	2010-2011 and ongoing	Possible GSGSSI Project Funding contribution	SGS has already developed a draft protocol based on the 2004 census that should be finalised, tested and implemented. Need to sort out the protocols regarding the curation and analysis of the data

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
5.2.7	Conduct an archipelago-wide census once every 10 years	MEDIUM	Once every 10 years; next census due in 2014. If five-yearly photo-survey monitoring undertaken in 5.2.6 is sufficiently representative, 10 yearly archipelago-wide counts may not be necessary.	External Funding	Use methodology employed in previous census. The need for and frequency of the archipelago-wide census is linked with the photo-survey monitoring identified in 5.2.6
5.2.8	If monitoring of population trends at any of the sites away from Bird Island indicates more rapidly declining populations elsewhere, initiate a second long-term demographic study to diagnose the underlying causes of the population change	MEDIUM	Depends on monitoring results	External Funding	Would involve following similar protocols to those used at Bird Island
<b>Grey-headed albatross</b>					
5.2.9	Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme
5.2.10	Consider photo-survey monitoring of population trends at selected/representative colonies on a five-yearly basis. Also investigate the involvement of passengers aboard cruise-liners in this monitoring. Need to develop protocols, and formally engage with the cruise-line industry. Initially, this should be tested in a pilot study with selected cruise leaders to determine the feasibility of such an approach and the reliability of the results	MEDIUM-HIGH	2009 and ongoing	Possible GSGSSI Project Funding contribution	SGS has already developed a draft protocol based on the 2004 census that should be finalised, tested and implemented. Need to sort out how the protocols regarding the curation and analysis of the data

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
5.2.11	Conduct an archipelago-wide census once every 10 years	HIGH	Once every 10 years; next census due in 2014. If five-yearly photo-survey monitoring undertaken in 5.2.10 is sufficiently representative, 10 yearly archipelago-wide counts may not be necessary	External Funding	Use methodology employed in previous census. The need for and frequency of the archipelago-wide census is linked with the photo-survey monitoring identified in 5.2.10
5.2.12	If monitoring of population trends at any of the sites away from Bird Island indicates more rapidly declining populations elsewhere, initiate a second long-term demographic study to diagnose the underlying causes of the population change	MEDIUM	Depends on monitoring results	External Funding	Would involve following similar protocols to those used at Bird Island
<b>Light-mantled sooty albatross</b>					
5.2.13	Maintain annual monitoring of population trends and productivity at Bird Island	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme
5.2.14	Investigate additional sites for annual monitoring of population size and breeding success. Alternatively, identify sites that could be feasibly censused about every five years	MEDIUM	2010-2011 and monitoring thereafter if feasible	Possible GSGSSI Project Funding contribution	Husvik and Maiviken have been mentioned as possible sites (in the 2006 Workshop report). However, Husvik is not regularly visited, and there are not sufficient numbers of nests at Maiviken to allow population trends to be reliably established, especially given the substantial fluctuation in numbers at the study site on Bird Island. A minimum of 40 – 50 nests is needed. It may not be feasible to establish additional sites that can be monitored annually, in which case sites that can be censused about every five years should be identified
5.2.15	Investigate methods for an archipelago-wide census to assess overall population size, and carry out census	MEDIUM-HIGH		External Funding	An archipelago-wide census of light-mantled sooty albatrosses poses substantial practical difficulties. However, it is important to investigate the feasibility of such a survey (and possible methods) to obtain an estimate of the SG population (the largest population of the species)

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
<b>Northern giant petrel</b>					
5.2.16	Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme
5.2.17	Maintain annual monitoring of population trends at Albatross (from study plots) and Prion islands (whole island)	MEDIUM	In progress, need to secure long-term funding to ensure continuation of work	GSGSSI Project Funding	Funding available (£20k per annum) up until 2010. Need to secure longer-term funding to continue thereafter
5.2.18	If monitoring of population trends indicates that the Albatross and Prion island populations differ from the Bird Island population, consider initiating a second long term demographic study	LOW	Depends on monitoring results	External Funding	Would involve following similar protocols to those used at Bird Island
<b>Southern giant petrel</b>					
5.2.19	Maintain annual monitoring of population trends and demography, and census of all colonies every 10 years at Bird Island	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme
5.2.20	Maintain annual monitoring of population trends at Albatross and Prion islands	MEDIUM	In progress, need to secure funding to continue beyond 2010	GSGSSI Project Funding	Funding available (£20k per annum) up until 2010. Need to secure longer-term funding to continue thereafter
5.2.21	If monitoring of population trends indicates that the Albatross and Prion island populations differ from the Bird Island population, consider initiating a second long term demographic study	LOW	Depends on monitoring results	External Funding	Would involve following similar protocols to those used at Bird Island
5.2.22	Conduct a census of populations at the South Sandwich Islands	MEDIUM	In the next five years?	Possible GSGSSI Project Funding contribution	There is no recent estimate of nesting southern giant petrels at the South Sandwich Islands. Given the substantial changes in population sizes at other localities, it would be useful to obtain a current estimate
<b>White-chinned petrel</b>					
5.2.23	Maintain monitoring of population trends at Bird Island every five years	HIGH	Ongoing	BAS	Part of BAS long-term research and monitoring programme

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
5.2.24	Expand the Bird Island monitoring protocols to several other sites, ideally including sites with and without introduced mammals to monitor their impact on white-chinned petrels	MEDIUM	2010-2011, and then ongoing	Possible GSGSSI Project Funding contribution	Prion Island, Husvik, Coral Bay and Maiviken have been set up as long-term monitoring sites by SGS in 2005-07. However, funding is required to ensure ongoing monitoring of these sites. Also need to consider feasibility of work in terms of practicality and potential disturbance to birds and the nesting habitat. One possibility is to include the Husvik site in the BAS higher-predator monitoring
	<b>All species</b>				
5.2.25	Together with other relevant OTs and UK experts, ensure for all UK SAOT ACAP species that the Species Factsheets maintained by BirdLife International as part of the IUCN Red List process.	MEDIUM	Annually	ACAP co-ordinator together with relevant UK experts and OTs	BirdLife maintain the IUCN Red List for Birds, and Species Fact Sheets for all globally threatened species. It is important to ensure that these fact sheets and indeed the conservation status are an accurate reflection of the latest available information. Someone in the UK ACAP community (UK ACAP co-ordinator) should take responsibility for ensuring, for all the UK SAOT ACAP species, that the fact sheets are reviewed annually for accuracy and that proposals relevant to changes in the IUCN conservation status are properly dealt with
6	<b>Foraging range and areas</b>				
6.2.1	Tabulate the existing tracking data by stage of breeding cycle (prelaying exodus, incubation, brooding, chick-rearing) and status (sex, breeding/nonbreeding adult, juvenile, fledgling etc) and site for all seven ACAP species breeding at South Georgia	MEDIUM	2009/10	BAS	This would be a useful exercise (that would need to be undertaken by BAS as they have collected all the tracking data), and would enable the data gaps to be more readily appreciated
6.2.2	Continue BAS remote-tracking programme, systematically updating and filling gaps in a prioritised manner	HIGH	Ongoing	BAS	BAS are continuously using and updating their long-term tracking archive to investigate habitat preferences, overlap with fisheries and other aspects of foraging ecology. Juveniles and pre-breeders of all ACAP species are especially important given their particular vulnerability to incidental fisheries mortality

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
6.2.3	Identify possible spatial gaps in the tracking data (i.e. sites other than Bird Island where tracking would be useful), and attempt to fill these if considered priorities	MEDIUM-HIGH	2010	BAS will need additional external funding to conduct work at sites outside of Bird Island	It is likely that birds in the north-west of the island are similar in their foraging ecology to birds at Bird Island. However, black-browed albatrosses from the south-east of South Georgia may be foraging in different areas than those from Bird Island, and this would be useful to investigate (if funding was obtained)
6.2.4	Ensure all tracking data are submitted to the BirdLife Global Procellariiform Tracking Database	MEDIUM	Ongoing		BAS routinely submit their tracking data to the Global Procellariiform Tracking Database. GSGSSI to ensure that any other researchers collecting tracking data at SGSSI are required to submit these data to GSGSSI and the tracking database
6.2.5	Seek opportunities (BAS) to collaborate with researchers and institutions involved with tracking work on ACAP species at other sites and thus contribute to regional and global assessments and/or reviews of albatross and petrel distribution and overlap with fisheries	MEDIUM	Ongoing	BAS	Collaboration essential to monitor status of regional and global populations (e.g. wandering albatross collaboration with colleagues from South Africa and France)
6.2.6	Implement study to investigate oceanographic and biological drivers of seabird distribution around South Georgia, and identify foraging hotspots, and use results to provide management recommendations	MEDIUM-HIGH	2009-2011	Funding has been obtained from the South Georgia Heritage Trust (SGHT)	Funding has been obtained for this study from the SGHT, and will be initiated in early 2009 by a student registered at the University of Cambridge, with supervision from BAS. The student will be making use of BAS data. The results of the study will provide useful information for the management of at sea areas
6.2.7	Design and implement a wider diet sampling programme	LOW	2009-2010 (investigate feasibility and design programme), and then ongoing (e.g. 30 samples once every three years) if feasible. Probably more important at other OTs where there are no diet studies being undertaken.	External Funding	This protocol involves inducing regurgitation by chicks immediately after they have been fed, and was tested on black-headed and grey-headed albatrosses at Bird Island, without any deleterious impacts on the subsequent survival or fledging mass of chicks sampled. BAS already monitor the diet of black-browed and grey-headed albatrosses annually, and of wandering albatross and white-chinned petrel intermittently, as part of dedicated studies at Bird Island. A wider sampling programme (at other sites and OTs) would provide information on the extent to which albatrosses and petrels elsewhere include and rely on discards and offal in their diet, as opposed to natural prey

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
7	<b>Fishery-related issues</b>				
7.2.1	UK with other EU ACAP Parties (France, Spain) to seek to ensure better engagement by European Commission in environmental issues relating to external fisheries, especially to address the matter of seabird-fisheries interactions and seabird bycatch mitigation in RFMOs	HIGH	Ongoing, 2010 will provide an opportunity to engage ICCAT on the issue of seabird bycatch mitigation.	UK Government (Defra & FCO)	Need a coordinated and joined-up approach to ensure seabird bycatch issues are strongly motivated and supported at RFMO meetings. It is particularly important that UK colleagues involved in international fisheries policy remain engaged in ACAP issues to ensure they understand and are supportive of the messages & positions being advanced by ACAP.
7.2.2	Include seabird bycatch expertise at priority RFMO meetings	MEDIUM	Ongoing, 2010 will provide an opportunity to engage ICCAT on the issue of seabird bycatch mitigation	UK Government	Delegations should ideally include seabird bycatch experts at the priority RFMO meetings, or at least ensure thorough interaction with experts prior to and following the meetings
7.2.3	Investigate involvement in the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) RFMO, on environmental (seabird bycatch) grounds	MEDIUM	2010	UK Government	CCSBT fisheries have high overlap with the distribution of ACAP species, including those from GSGSSI. It is thus an important RFMO to engage on the issue of seabird bycatch, and have not adopted/implemented rigorous mitigation and observer standards
7.2.4	UK to participate actively in ACAP RFMO coordinator approach, which will be piloted in IOTC, IATTC, ICCAT and WCPFC	HIGH	Ongoing, 2009 will provide an opportunity to engage ICCAT on the issue with the completion of the seabird assessment	UK Government	In this approach, an RFMO coordinator will work with ACAP Parties and Advisory Committee officials to develop an ACAP-agreed engagement strategy for each RFMO meeting. Of these pilot RFMOs, ICCAT is of particular importance for birds from South Georgia and the rest of the South Atlantic
7.2.5	Use results of the ICCAT seabird risk assessment study to develop an influencing strategy aimed at reducing/eliminating seabird bycatch by the use of a suite of appropriate mitigation measures and an effective observer scheme in ICCAT fisheries	HIGH	2010, and then ongoing	UK Government	Coordinate with other ACAP parties as envisaged in the ACAP-RFMO interaction plan. GSGSSI are not a member of ICCAT, but given the importance of this RFMO, should maintain links (through the UK Government) and help work towards improved seabird bycatch mitigation measures.
7.2.6	UK to seek to ensure that other ACAP Parties (such as Argentina, Uruguay, Brazil and South Africa) support or initiate measures to reduce seabird bycatch within relevant RFMOs	HIGH	Ongoing	UK Government	Need a coordinated and joined-up approach to seabird bycatch at RFMO meetings

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
7.2.7	Collaborate with other countries/organisations to help reduce bycatch (sharing of expertise and advice) and IUU fishing in areas outside of the SGSSI Maritime Zone and the CCAMLR Convention area	HIGH	Ongoing	UK Government	GSGSSI has considerable expertise and influence in fisheries protection and bycatch mitigation, which would be useful to share with and influence other organisations/authorities
7.2.8	Work with fishing companies operating in SGSSI & CCAMLR waters to ensure that successful mitigation of seabird bycatch in these waters is complemented by the same measures when these and other vessels operate in other areas where there are risks of seabird bycatch	MEDIUM-HIGH	Ongoing	GSGSSI Core Work	Encourage fishing companies whose vessels implement successful mitigation methods in CCAMLR waters to adopt the same approach in other areas where bycatch is a problem
7.2.9	Work with fishing companies operating in adjacent South Atlantic waters to encourage proper implementation of seabird bycatch measures. Companies fishing in the High Seas of the SW Atlantic, embarking from the Falkland Islands, provide an opportunity for such engagement	HIGH	Ongoing	GSGSSI Core Work	The foraging ranges of ACAP species breeding at SGSSI extend well beyond the jurisdictional waters of GSGSSI. Consequently, there is a need to interact with fishing companies and authorities working in adjacent areas (where ACAP species are being killed in large numbers) to improve the implementation of seabird bycatch mitigation measures, and thus reduce overall levels of bycatch
7.2.10	Encourage and support initiatives by industry, governments and RFMOs to combat IUU fishing	HIGH	Ongoing	GSGSSI Core Work	
7.2.11	Ensure that the seabird bycatch reporting requirements of ACAP are met	HIGH	2009 and ongoing	GSGSSI Core Work	The ACAP reporting requirements (including the reporting of seabird bycatch data) are currently being revised. The annual submission of these data to ACAP is required so that they can be collated. Currently, these data are collected by MRAG and routinely submitted to CCAMLR. Need to determine the most efficient process of including these data in the annual reporting to ACAP
7.2.12	UK to work with other ACAP Parties (and EU members) to improve bycatch data collection and reporting by ICCAT, and all other relevant RFMOs of which the UK/EC are members or associated parties	HIGH	Ongoing	UK Government together with GSGSSI and other OTs	ICCAT is a critical RFMO for ACAP species from SGSSI. Rigorous collection and reporting of bycatch data are essential components of a bycatch reduction strategy, but are currently lacking in many RFMOs, including ICCAT. SGSSI are not a member of ICCAT, but given the importance of this RFMO, should maintain links (through the UK Government) and help work towards improved seabird conservation measures

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
7.2.13	UK to work with other ACAP parties that are EU members (Spain and France) to ensure that relevant EC fisheries bycatch data from areas outside of CCAMLR are collected and submitted to ACAP	HIGH	Ongoing	UK Government with GSGSSI and other OTs	Linked to 7.2.12 (ACAP seabird bycatch reporting requirements) and 7.2.13. In order to understand properly the extent of seabird bycatch and the impact on ACAP species and populations, it is necessary to improve the level of observer coverage (especially on the High Seas/RFMOs) and bycatch data collection outside of the CCAMLR area, and that all relevant bycatch data are reported
7.2.14	Collect longline hooks and snoods from albatross nests at Bird Island to ascertain their origin	LOW	Ongoing	BAS, GSGSSI Core Work	Fishing hooks are occasionally found in the nests of albatrosses at Bird Island. The hooks will be collected (and documented) by BAS field workers, and sent to the GSGSSI at Stanley with the aim, if possible, of determining the fishery of origin and initiating an education programme to reduce/eliminate the incidence of discarding of hooks
<b>8</b>	<b>Data acquisition and management</b>				
8.2.1	Ensure all historical and recent data on albatrosses and petrels (together with associated habitat data) are incorporated into the South Georgia GIS, and that future (updated) data are submitted routinely	MEDIUM-HIGH	2008/09 and ongoing	GSGSSI Core Work/Project Funding, with inputs from relevant parties	The GSGSSI GIS (and databases) serves as the central repository for the status and trend and breeding site data. Much of the data collected has already been incorporated into the GIS, but some has not, and it is crucial to ensure that data entry and management remains up to date. BAS maintain their own database for data collected at Bird Island. Ensure that there are proper linkages between these two systems. Investigate incorporating data from SSI in the same system
8.2.2	Write up of formal protocols for the collection and curation/management of population status and trends and breeding sites management and threat data to ensure that methods are standardised and compatible with the South Georgia GIS	MEDIUM	2010-2011	GSGSSI Project Funding	Sally Poncet (SGS) has already produced a draft document on wildlife and habitat survey protocols, that provides a useful template for the ongoing collection of such data, whether it is part of a routine monitoring programme or of an opportunistic nature
8.2.3	Ensure that updated population status and trends and breeding site management data are submitted to ACAP on a regular (annual) basis	HIGH	Ongoing	GSGSSI Core Work, with inputs from relevant parties	ACAP reporting requirement to ensure that ACAP can collate the most recent data from Parties and use for regional analyses and assessments. This process will be made easier once the ACAP databases and web portal have been finalised

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
8.2.4	Request all researchers/data holders conducting research/monitoring on albatrosses and petrels at SGSSI to make available their information/data to GSGSSI for inclusion in the GIS (i.e. for management purposes) and for use by ACAP, subject to the ACAP rules for accessing and using such data, and intellectual property rights	HIGH	Ongoing	GSGSSI Core Work	To ensure albatross and petrel data collected by outside researchers at SGSSI is submitted to GSGSSI and ACAP so that it can be used for management purposes
8.2.5	Ensure that the seabird bycatch reporting requirements of ACAP are met (new protocols are currently being developed). Determine the most efficient method of obtaining the relevant data from CCAMLR (where all SGSSI bycatch and observer data are held) for ACAP reporting purposes (see also 7.2.12)	HIGH	Ongoing	GSGSSI Core Work	The ACAP reporting requirements (including the reporting of seabird bycatch data) are currently being revised. The annual submission of these data to ACAP is required so that they can be collated. Currently, these data are collected by MRAG and routinely submitted to CCAMLR. Need to determine the most efficient process of including these data in the annual reporting to ACAP
8.2.6	Maintain the bibliographic database of published research (scientific papers and reports) carried out at SGSSI	LOW	Ongoing	GSGSSI Project Funding	A bibliographic database of research publications (abstracts included) has been developed by Project Atlantis (for publications from 1998-2008). This should be updated/maintained as a tool for those involved/interested in research and management of SGSSI
<b>9</b>	<b>Education and awareness</b>				
9.2.1	Promote the objectives of ACAP through the fora and mechanisms available (e.g. website, meetings); identify additional mechanisms to disseminate information	MEDIUM-HIGH	Ongoing	GSGSSI Core Work	Specific education and public awareness initiatives will be presented in the annual ACAP Implementation report. The SGSSI annual review of the ACAP Implementation Plan could serve as an opportunity to identify specific opportunities
9.2.2	Maintain the profile of SGSSI as critical sites for the conservation of albatrosses and petrels, and of the work that is being undertaken to address the range of threats at SGSSI and elsewhere	HIGH	Ongoing	GSGSSI Core Work	Specific education and public awareness initiatives will be presented in the annual ACAP Implementation report. The SGSSI annual review of the ACAP Implementation Plan could serve as an opportunity to identify specific opportunities
9.2.3	Collaborate with other Parties and organisations in the development and implementation of regional and international education and awareness programmes	MEDIUM-HIGH	Ongoing	GSGSSI Core Work	

	<b>Actions</b>	<b>Priority</b>	<b>Timeframe</b>	<b>Responsibility &amp; possible funding</b>	<b>Details &amp; Current status of action</b>
9.2.4	Share expertise and collaborate with other South Atlantic Overseas Territories and other countries whose jurisdictional waters are important for South Atlantic albatrosses and petrels (Chile, Argentina, Uruguay, Brazil, South Africa and Namibia) to encourage conservation (principally bycatch mitigation) of albatrosses and petrels in these areas	HIGH	Ongoing	GSGSSI Core Work	Due to their wide ranging movements, the conservation of albatrosses and petrels from SGSSI requires international collaboration to ensure that seabird bycatch is being eliminated/minimised on the high seas (through interactions with RFMOs) and in the jurisdictional waters of other countries. The AC is in the process of developing a strategy to encourage and work with other countries on this issue, which will provide more specific information
10	<b>Monitoring and review</b>				
10.1.1	Develop a standardised template for the annual review of the Implementation Plan that links with the progress indicators being developed by ACAP, and conduct annual review of plan, with inputs from all stakeholders	MEDIUM-HIGH	2011 and then annual review	GSGSSI Core Work	Required for stakeholders to provide feedback of their activities and to monitor progress of the plan. Review process with external stakeholders to take place via email

## Appendix 2: Species listed in Annex 1 of ACAP

Common name	Scientific name	IUCN status (2010)
Northern royal albatross	<i>Diomedea sanfordi</i>	EN
Southern royal albatross	<i>Diomedea epomophora</i>	VU
Wandering albatross	<i>Diomedea exulans</i>	VU
Antipodean albatross	<i>Diomedea antipodensis</i>	VU
Amsterdam albatross	<i>Diomedea amsterdamensis</i>	CR
Tristan albatross	<i>Diomedea dabbenena</i>	CR
Sooty albatross	<i>Phoebastria fusca</i>	EN
Light-mantled sooty albatross	<i>Phoebastria palpebrata</i>	NT
Waved albatross	<i>Phoebastria irrorata</i>	CR
Short-tailed albatross*	<i>Phoebastria albatrus</i>	VU
Black-footed albatross*	<i>Phoebastria nigripes</i>	EN
Laysan albatross*	<i>Phoebastria immutabilis</i>	NT
Atlantic yellow-nosed albatross	<i>Thalassarche chlororhynchos</i>	EN
Indian yellow-nosed albatross	<i>Thalassarche carteri</i>	EN
Grey-headed albatross	<i>Thalassarche chrysostoma</i>	VU
Black-browed albatross	<i>Thalassarche melanophris</i>	EN
Campbell albatross	<i>Thalassarche impavida</i>	VU
Buller's albatross	<i>Thalassarche bulleri</i>	NT
Shy albatross	<i>Thalassarche cauta</i>	NT
White-capped albatross	<i>Thalassarche steadi</i>	NT
Chatham albatross	<i>Thalassarche eremita</i>	VU
Salvin's albatross	<i>Thalassarche salvini</i>	VU
Southern giant-petrel	<i>Macronectes giganteus</i>	LC
Northern giant-petrel	<i>Macronectes halli</i>	LC
White-chinned petrel	<i>Procellaria aequinoctialis</i>	VU
Spectacled petrel	<i>Procellaria conspicillata</i>	VU
Black petrel	<i>Procellaria parkinsoni</i>	VU
Westland petrel	<i>Procellaria westlandica</i>	VU
Grey petrel	<i>Procellaria cinerea</i>	NT

\* The short-tailed, black-footed and Laysan albatrosses were added to Annex 1 of ACAP at the Third Session of the Meeting of the Parties in April-May 2009

**Appendix 3: ACAP breeding sites at South Georgia and South Sandwich Islands.** The species codes are as follows: WA – wandering albatross, GHA – grey-headed albatross, BBA – black-headed albatross, LMA – light-mantled sooty albatross, NGP – northern giant petrel, SGP – southern giant petrel, WCP – white-chinned petrel. SPA (Protection status) – Specially Protected Area

Island/Breeding site	Island Size (ha)	Protection status	ACAP species	Remarks
<b>SOUTH GEORGIA</b>				
Albatross Island	114.8	SPA	WA, LMA, NGP, SGP, WCP	
Annenkov Island	1325	SPA	WA, BBA, LMA, NGP, SGP, WCP	
Anvil Stacks	5.7	SPA	WCP	Two sites combined
Bernt	4.7	SPA	GHA, LMA, WCP	
Bird Island	467.9	SPA	WA, GHA, BBA, LMA, NGP, SGP, WCP	
Bjornstadt Bay island	1.3	SPA	LMA, WCP	Two sites combined
Cape Vakop island	5	SPA	LMA, WCP	Two sites combined
Clerke Rocks	50	SPA	BBA	Made up of three islands
Cooper Island	424.3	SPA	BBA, LMA, NGP, SGP, WCP	
Crescent Island	10.9	SPA	WA, LMA, NGP, WCP	
Grass Island	25.6		LMA, NGP, SGP, WCP	Rats have recently been eradicated
Green Island	67.2	SPA	BBA, LMA, WCP	
Hall Island	17	SPA	BBA, LMA, WCP	Made up of four islands
Harcourt Island	30.7		LMA, NGP, SGP, WCP	Rats present on island
HaugeReef	23.3	SPA	LMA, NGP, WCP	Made up of three islands
Hogs Mouth Rocks	2.7	SPA	LMA	
Inner Lee Island	15.7	SPA	WA, LMA, NGP, SGP, WCP	
Invisible Island	13.5	SPA	WA, LMA, SGP, WCP	
Jomfruene	4.3	SPA	GHA, WCP	Made up of three islands
KupriyanovIslands	22.9	SPA	WA, LMA, SGP, NGP, WCP	Made up of five islands
Low Rock Point island	5.6	SPA	BBA, LMA	
Main Island, Willis Island	45.3	SPA	GHA, BBA, LMA, WCP	
McCarthy Island	21.4	SPA	LMA, NGP, WCP	
Mollymawk Island	12.6	SPA	WA, LMA, SGP, WCP	
Outer Lee Island	10	SPA	WA, LMA, NGP, SGP, WCP	
Petrel Island	11.3	SPA	WA, LMA, WCP	
Pickersgill Islands	20.4	SPA	LMA, NGP, SGP, WCP	Made up of five islands
Prion Island	50.2	SPA	WA, LMA, NGP, SGP, WCP	Made up of two islands
Proud Island	9.7	SPA	WA, LMA, NGP, WCP	
Right Whale Rocks	1.9	SPA	LMA, WCP	Made up of two sites
Saddle Island	103.3	SPA	WA, LMA, NGP, SGP, WCP	Norway rats recently discovered
Samuel Islands	18.7	SPA	WA, LMA, SGP, WCP	Made up of two islands
SkrapSkerries	9.9	SPA	LMA, WCP	
Skua Island	12.4	SPA	WA, LMA, SGP, WCP	
Sorn	2.9	SPA	LMA	
SG mainland - Barff			LMA, NGP, SGP, WCP	
SG mainland - Cumberland			NGP, SGP	
SG mainland - Northwest			WA, GHA, BBA, LMA, NGP, SGP, WCP	
SG mainland - Nunez		SPA	WA, BBA, LMA, NGP, SGP, WCP	rat free areas designated SPA
SG mainland - Salvesen			LMA, NGP, SGP, WCP	
SG mainland - South Coast		SPA	WA, BBA, LMA, NGP, SGP, WCP	rat free areas designated SPA
SG mainland - Stromness			NGP, SGP, WCP	

<b>Island/Breeding site</b>	<b>Island Size (ha)</b>	<b>Protection status</b>	<b>ACAP species</b>	<b>Remarks</b>
Tern Island	5.2	SPA	LMA, WCP	
The Guides	8.3	SPA	WCP	Made up of four islands
Trinity Island	82.3	SPA	GHA, BBA, LMA, WCP	
Verdant Island	6.7	SPA	NGP, WCP	Made up of three islands
Welcome Islands	37.8	SPA	LMA, BBA, WCP	Made up of three islands
Wirik Bay Island	5.6	SPA	LMA, WCP	
<b>SOUTH SANDWICH ISLANDS</b>				
Candlemas Island	950		SGP	
Bellingshausen Island	140		SGP?	Breeding still to be confirmed
Visokoi Island	2750		SGP?	Breeding still to be confirmed
Zavodovski Island	1400		SGP	

#### Appendix 4: Assessment of threats identified at ACAP breeding sites of South Georgia

Breeding site	Key species	Nature of threat	Threat subcategory	Threat species	Scope	Severity	Level	Current management action
Harcourt Island	White-chinned petrel	Predation by alien species	Predation by alien species	Norway Rat	High	Low	Low	Eradication under consideration
Saddle Island*	White-chinned petrel	Predation by alien species	Predation by alien species	Norway Rat	High	Low	Low	Eradication under consideration
South Georgia (mainland)	White-chinned petrel	Habitat loss/destruction	Habitat destruction by alien species	Reindeer	High	Low	Low	Eradication under consideration
South Georgia (mainland)	White-chinned petrel	Predation by alien species	Predation by alien species	Norway Rat	High	Low	Low	Eradication under consideration

\* added following the recent (2006) discovery of Norway rats at Saddle Island