

**Falkland Islands implementation plan for the Agreement on the Conservation of Albatrosses and Petrels (ACAP): review of current work and a prioritised work programme for the future**

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Black-browed Albatrosses in flight; Lino-cut © Leigh-Anne Wolfaardt

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## 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, including on behalf of the UK South Atlantic Overseas Territories. Collectively the UK South Atlantic Overseas Territories are breeding range states for 12 of the 29 species currently listed by the Agreement, three of which are endemic, as breeders, to the Tristan Islands. The Agreement and its Action Plan describe the actions that Parties shall progressively implement. The Agreement Action Plan 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 Falkland Islands ACAP Implementation Plan) summarises the current status of ACAP-related work in the Falkland Islands, and provides 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 (UK and Falkland Islands) 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 organisations/departments 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 February 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 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 currently covered by the Agreement. For most of these, the SAOTs host significant proportions of the global breeding population, three of which are endemic as breeders to the Tristan da Cunha group of islands (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 (Anon 2006). 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 Implementation Plan for the Falkland Islands builds on the 2006 workshop and report, and has been written to meet the ACAP requirements and thus contribute to the 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. The Implementation Plan includes information on the current status of ACAP-related work in the Falkland Islands, as well as linkages to the relevant legislation and biodiversity plans. A summary of the recommended actions, their priority rating, and organisations involved in implementing these actions 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 the Falkland Islands, 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 the Falkland Islands are known or are thought likely to be killed.

It is important to note that a range of organisations and individuals undertakes ACAP-related work in the Falkland Islands. This Implementation Plan serves to integrate all of these activities and to ensure that the work is carried out in a coordinated manner.

## 2. ACAP species

Three of the 29 currently-listed ACAP species breed at the Falkland Islands. For two of these species, the Black-browed Albatross *Thalassarche melanophris*, and the Southern Giant Petrel *Macronectes giganteus*, the Falkland Islands host significant proportions of the global

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

breeding population, ca. 67% of the world total for Black-browed Albatrosses, and ca. 40% of the world total for Southern Giant Petrels.

**Table 1:** ACAP-listed species breeding on the Falkland 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
Black-browed Albatross	Largest population	EN	-1% pa <sup>2</sup>
Southern Giant Petrel	Largest population	LC	Increasing
White-chinned Petrel	Very small population	VU	Unknown

EN – Endangered, VU – Vulnerable, LC – Least Concern

An additional nine non-breeding ACAP species have been recorded as visitors to the territorial waters of the Falkland Islands (Table 2). For a list of the current species included in Annex 1 of ACAP, see Appendix 2.

**Table 2:** Non-breeding ACAP-listed species that have been recorded as visitors to the territorial waters of Falkland Islands (from information in White *et al.* 2002 and Falklands Conservation unpubl. data)

Species	Visitor status	IUCN status (2010)
Wandering Albatross	Recorded in all months, highest numbers from January to April	VU
Northern Royal Albatross	Recorded in all months, peak numbers recorded from March to July	EN
Southern Royal Albatross	Recorded in all months, peak numbers recorded from March to June	VU
Light-mantled Sooty Albatross	Most records from August to November	NT
Shy/White-capped Albatross	Scarce non-breeding visitor; mostly immature, from January to May, peak in April	NT
Grey-headed Albatross	Recorded in all months, with a distinct peak from May to September	VU
Atlantic Yellow-nosed Albatross	One record (May 2003), Western FICZ	EN
Buller's Albatross	One record (July 2007)	NT
Northern Giant Petrel	Throughout the year, with a slight tendency for higher numbers during the austral winter	LC

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

<sup>2</sup> This figure is taken from Huin and Reid (2007); the decline is not consistent between years and sites. Furthermore other work (Strange 2008) shows an increase in the population at many sites. See below for further discussion.

### 3. Relevant legislation, conservation listings and plans

There are a number of national policies and legislation that guide conservation management in the Falkland Islands. The Falkland Islands Environment Charter was signed jointly by the Falkland Islands Government (FIG) and the UK Minister for Overseas Territories in September 2001. The Environment Charter outlines the environmental management commitments of the UK Government and FIG, and serves as a framework policy to guide the development of management policies and plans.

*The Conservation of Wildlife and Nature Ordinance 1999* was enacted (in 1999) to replace the previous *Wild Animals and Birds Protection Ordinance 1964*, which was geared more towards the protection of economic resources, such as grazing and livestock than conservation management. This updated conservation legislation contains provisions for the strict protection of wild birds (including all ACAP-listed species), wild animals and important wild plants, the prevention and management of introduced species and the designation of National Nature Reserves. It applies to the entire terrestrial area of the Falkland Islands, and the territorial sea, up to 12 nautical miles (nm) offshore.

The *Fisheries (Conservation and Management) Ordinance 2005* seeks to maintain the potential of fisheries resources to meet the reasonably foreseeable needs of future generations, while avoiding, remedying, or mitigation adverse effects of fishing activities on the long term sustainability of the marine environment. The Fisheries Ordinance also extends the *Conservation of Wildlife and Nature Ordinance 2009* to the full extent of the Falkland Islands Exclusive Economic Zone (EEZ), i.e. 200nm, including the Falkland Islands Interim Fishery Conservation and Management Zone (FICZ) and the Falklands Outer Conservation Zone (FOCZ) (Figure 2). The Fisheries Ordinance and licensing provisions give the Director of Fisheries powers to impose conditions on vessels fishing in the jurisdictional waters of the Falkland Islands and on Falklands Islands registered vessels operating on the high seas. This is achieved through a number of mechanisms, including vessel reporting, an observer programme, and licence conditions requiring the use of conservation and mitigation measures to reduce the incidental mortality of seabirds in longline and trawl fisheries.

In 2008, FIG published a Biodiversity Strategy, which sets out the desired future for biodiversity in the Falkland Islands, and identifies priority species, habitats, threats and management actions, for the period 2008-2018 (Falkland Islands Government, 2008). The Biodiversity Strategy is accompanied by the Falkland Islands State of the Environment Report 2008, which documents the current status of knowledge of the state of the environment, both on land and at sea (Otley *et al.*, 2008). It describes the physical and biological environment, as well as the human population, social infrastructure, and commercial and recreational activities undertaken within these habitats, and highlights processes that threaten Falkland Islands wildlife as well as key conservation policies required to manage these threats.

A conservation plan for New Island, an important breeding site for Black-browed Albatrosses, was published in 2007 (Strange, 2007). The plan is not a conventional management plan, but rather an account of the biodiversity of the island, and serves as a baseline to inform the future management of the island (Strange, 2007). Consequently, it includes both historical and contextual information as well as visions, strategies and policies for the long-term conservation of the island and its wildlife, including two ACAP listed species. Currently, management plans are in the process of being finalised for Steeple Jason and Grand Jason

islands (by Falklands Conservation on behalf of the Wildlife Conservation Society), globally important breeding sites for Black-browed Albatrosses, as well as Kidney Island and Sea Lion Island, which are ACAP breeding sites. These plans will review known biological data, assess environmental threats and recommend mitigation methods and management actions to minimise these threats and to enhance the islands' biodiversity, particularly their seabirds. They will establish systems for monitoring the key species and identify research priorities. The plans are due for completion in 2010.

The management of the Falkland Islands is also informed by a number of other national policies and International Treaties or Agreements. The most significant of these in relation to ACAP responsibilities is ACAP itself, which was ratified by the UK, including on behalf of the Falkland Islands and other South Atlantic Overseas Territories, in April 2004. Falkland Islands domestic legislation obliges all Falkland Islands registered vessels to comply with the International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78 regulations, with the exception of Annex IV (sewage from ships). This annex is not applied because the Falkland Islands is unable to comply with the legislative requirement for adequate reception facilities. The MARPOL regulations only apply to Falkland Islands registered ships and foreign flagged vessels operating within the territorial limits (12 nm) of the Falkland Islands. The United Nations Convention on Law of the Sea (UNCLOS) 1982 was ratified by the Falkland Islands in 1994. UNCLOS provides a framework for the responsible management of marine resources and a legal regime that affords ocean and coastal states rights and responsibilities for the management and use of fishery resources within their EEZs. Article 61 deals with the impact of the incidental mortality of seabirds and other non-target species and requires coastal states and states fishing on the high seas, to consider the effects on species associated with or dependent upon harvested species, with a view to maintaining or restoring populations of such associated or dependent species at sustainable levels. The convention also introduces the concept of precautionary management. In 2004, National Plans of Action (NPOA) for both longline (Sullivan, 2004a) and trawl (Sullivan, 2004b) fishing were adopted by FIG. Both of these plans are in the process of being revised (see below).

Species and habitat action plans are tools used in the Falkland Islands to guide the management of priority species and their habitats. These plans describe the causes of population declines (where these are known), threatening processes, and identify the actions required to arrest and reverse the decline, as well as research and management initiatives required to underpin these actions. The 2006 workshop report on the ACAP priorities of the UK SAOTs (Falklands Conservation, 2006) formed the basis of an ACAP species action plan. This plan was subsequently adapted specifically for the Falkland Islands in 2007, and used to review progress with the prescribed tasks and actions in both 2007 and 2008. This ACAP Implementation Plan follows on from the 2006 workshop report and the 2007/08 and 2008/09 review documents, and serves to review the current work related to ACAP and provide a prioritised work plan for the future.

#### **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.

**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 immediately before 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.

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 (Island Group, Breeding Island, Breeding Site) In the case of the Falkland Islands, each of the separate islands and islets is listed as a separate ACAP breeding site, except on the mainland of East and West Falklands, where the actual breeding

colony site is defined. In total, 42 ACAP breeding sites are recognised in the Falkland Islands (Appendix 3).

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 only identified threat (to ACAP species) in the Falkland Islands using this approach is predation of White-chinned Petrels *Procellaria aequinoctialis* by Feral Cats *Felis catus* at New Island (Appendix 4). It must be noted though that although the scope of this threat is recorded as very high, both the severity and level of the threat are recorded as low (see also below).

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 the Fifth Meeting of its Advisory Committee (AC5, scheduled to be held in 2010) 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.

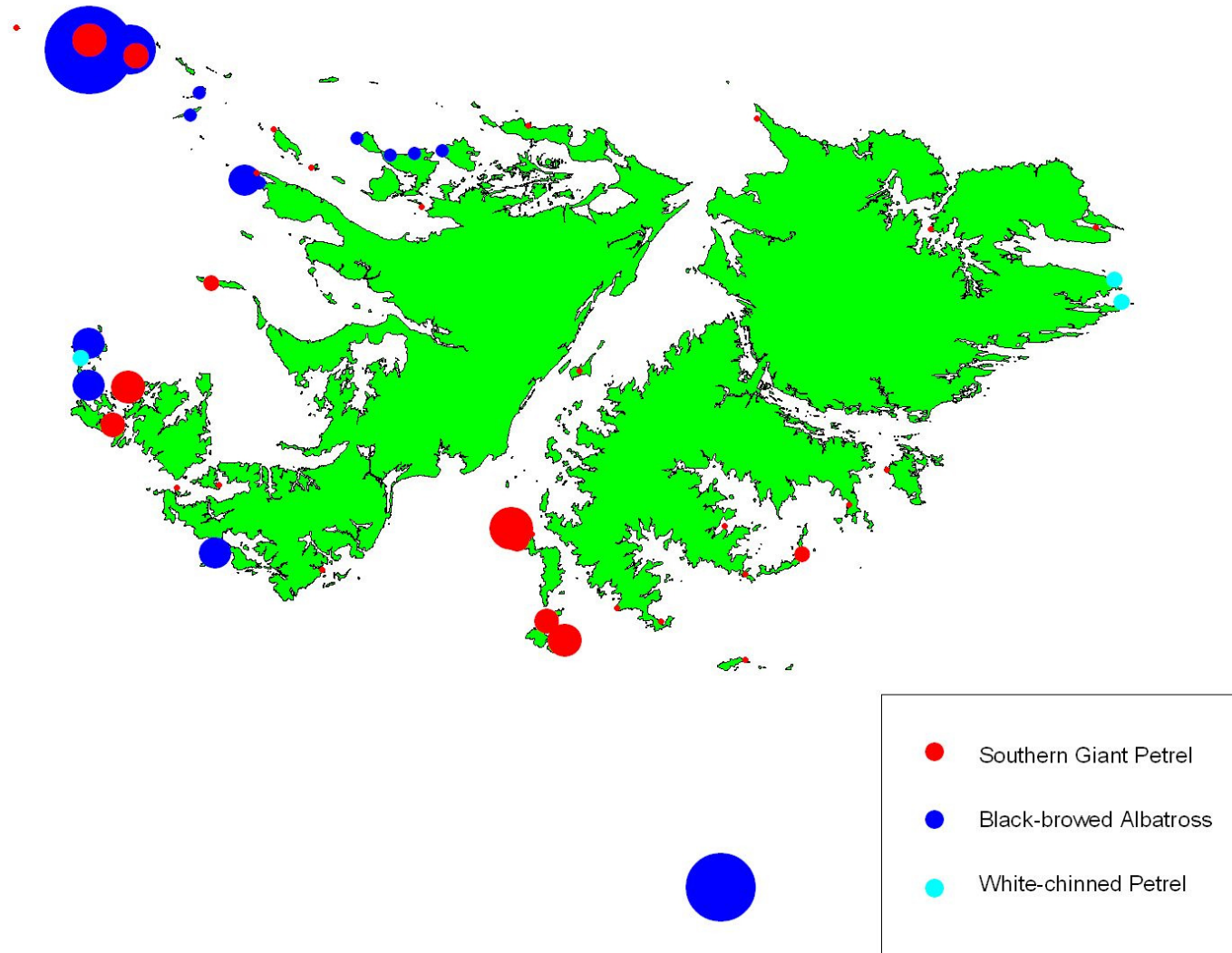
#### **4.1 Current status of the management of ACAP breeding sites in the Falkland Islands**

The overall vision of the Falkland Islands Biodiversity Strategy is to “*conserve and enhance the natural diversity, ecological processes and heritage of the Falkland Islands, in harmony with sustainable economic development*”. It is important to note that the majority (35 of 42, or 83%) of the ACAP breeding sites in the Falkland Islands are privately owned<sup>3</sup>. The proportion of breeding sites for Black-browed Albatrosses, Southern Giant Petrels and White-chinned Petrels that are privately owned are 93.5%, 66.6% and 33.3% respectively (Appendix 4). It is thus crucial that a consultative and collaborative approach is adopted in the management of breeding sites in the Falkland Islands, one in which all stakeholders are actively engaged. The distribution of the Falkland Islands ACAP breeding sites is indicated in Figure 1.

Falklands Conservation and the New Island Conservation Trust, two environmental Non-governmental Organisations (NGOs) in the Falkland Islands, have recently (November 2009) submitted an application to the UK Government’s Overseas Territories Environment Programme (OTEP) to fund a two year project aimed at developing an action plan, with FIG and other stakeholders, to implement the Falkland Islands Biodiversity Strategy in a collaborative and coordinated manner.

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<sup>3</sup> Sites managed by quasi-government organisations primarily for purposes other than conservation (mainly agriculture and tourism) are treated here as privately owned.



**Figure 1:** Distribution of ACAP breeding sites in the Falkland Islands (from Falklands Conservation)

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

The 1999 Conservation Ordinance affords full protection to all ACAP species and breeding sites in the Falkland Islands. In particular, the 1999 Ordinance prohibits the capture or killing of a protected wild animal (all ACAP species), taking or destroying the eggs of a protected animal, and damaging or destroying the breeding site or resting place of a protected animal. The majority of the breeding sites for ACAP species are privately owned; only 10 of the 42 ACAP breeding sites have been proclaimed National Nature Reserves (NNRs) (Appendix 3). Consequently, although the ACAP species are protected by the Conservation of Wildlife and Nature Ordinance 1999 and its amendments, breeding site conservation management objectives are best achieved through a collaborative approach between the various government departments, private landowners and other stakeholders.

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

The occurrence of introduced (non-native) mammals on islands is an issue of global conservation concern, and is generally considered to represent a threat to the albatrosses and petrels listed under ACAP, especially the smaller, burrow-nesting species. The impact of introduced rodents in the Falkland Islands does not appear to have been as severe as reported in other parts of the world, where rapid extinction of native species has followed the introduction of rats and mice. However, little work has been carried out on the impact of rodents on seabirds in the Falkland Islands (but see below and Quillfeldt *et al.* 2008). Both the Norway Rat *Rattus norvegicus* and the Black or Ship Rat *Rattus rattus* are present in the Falkland Islands, although the Black Rat is thought only to occur presently on New Island (Brown *et al.* 2001, Strange, 2007).

The Beaver Island LandCare Group and Falklands Conservation continue to implement a rat eradication programme in the Falkland Islands. The primary objective of this work is to contribute towards the conservation of Cobb's Wren *Troglodytes cobbi*, which only breeds on rat-free islands. However, the presence of ACAP species was and is used as one of the criteria in selecting sites to be eradicated. A number of sites have already been cleared of rats, including Governor Island, an ACAP site with breeding Southern Giant Petrels, where an eradication operation was implemented in August 2008. Follow up monitoring of cleared sites forms part of the rat eradication programme; a minimum of three rat breeding seasons is required between the eradication attempt and the assessment of the success (or not) of the eradication.

The House Mouse *Mus musculus*, is also present at a number of the ACAP breeding sites in the Falklands, and although there is currently no evidence that House Mice are a direct threat to ACAP species in the Falkland Islands, recent work on Gough Island (Tristan da Cunha) indicates that predation by House Mice reduces severely the breeding success of the Tristan Albatross *Diomedea dabbenena*, and is contributing towards the ongoing and rapid decline in numbers of Tristan Albatross (Cuthbert *et al.*, 2004; Wanless *et al.*, 2007, 2009). It is important to note that House Mice were not formerly considered to pose a threat to large seabirds; it was only in 2000 that their impact on Tristan Albatrosses and other seabirds became known (Cuthbert *et al.* 2004). It is also important to note that mice

are the only rodents present on Gough Island, and that in the absence of rats have grown larger and have expanded their niche to more formidable predators than any other island population of mice. Therefore it should not be assumed that because mice are a threat to seabirds on Gough Island, they will automatically pose a similar threat to seabirds in the Falklands. However, it does mean that rodent eradication plans for sites with both rats and mice need to be developed and implemented holistically, with due consideration of the potential consequences of eradicating rats, but not mice, from these islands.

The Falkland Islands form part of a cross-territory funding application submitted to Defra's Darwin Initiative in August 2009, which aims to develop further knowledge to eradicate House Mice from UK SAOT islands. The project, if funded, will comprise ongoing work at Gough Island, with additional activities planned for South Georgia and the Falkland Islands. The particular focus of the Falkland Islands component of the proposed work is to undertake diet and stable-isotope studies to investigate whether mice present at Steeple Jason Island are consuming seabirds. Initial observations indicate that nesting densities of Wilson's Storm Petrels *Oceanites oceanicus* are substantially lower on Steeple Jason, where mice are present, than at Grand Jason Island, which is mouse-free (Anon 2010).

Other introduced mammals considered to pose threats to ACAP species, either directly through predation or indirectly through habitat degradation and destruction, which are present in the Falklands, include Feral Cats *Felis catus*, European and Cottontail Rabbits (*Oryctolagus cuniculus* and *Sylvilagus floridanus*), Brown Hares (*Lepus europaeus*) and Patagonian or Grey Foxes *Lycalopex griseus* (although the latter are not present at any of the ACAP breeding sites). Cattle (*Bos taurus*) and sheep (*Ovis aries*) are also present at a number of the ACAP breeding sites.

Predation of White-chinned Petrels by Feral Cats at New Island is formally identified as a threat in the ACAP database. However, both the severity and level of the threat are recorded as low (Appendix 4). Research carried out at New Island has shown that cats on New Island feed predominantly on Cottontail Rabbits, Black Rats, and Thin-billed Prions *Pachyptila belcheri*, with no evidence that Black-browed Albatrosses were consumed (Quillfeldt *et al.*, 2008). There is some evidence that Feral Cats prey on the chicks of White-chinned Petrels, but in spite of this the relatively small colony of White-chinned Petrels at New Island (between 30 to 40 nests) has remained stable since 1972 (Reid *et al.*, 2007). The policy of the New Island Conservation Trust, as expressed in Strange (2007), is to continue to monitor the impact of invasive species, such as the Feral Cat, to understand better the interactions between the suite of alien species present on the island, and prepare and implement plans, as far as is practicable, to control their populations, or where possible, to eradicate them.

A review of biosecurity in the Falkland Islands was published in 2004 (Simpson and Hellstrom, 2004). The review included a range of recommendations with application to legislation, risk management, education, surveillance and inspection. One of the key recommendations of the report was the appointment of a Biosecurity Officer, which has been taken up by FIG. The importing of items into the Falkland Islands is controlled by the Department of Agriculture: Senior Veterinary Officer (fauna) and Senior Agricultural Advisor (flora); the day to day implementation of biosecurity policy is carried out by the Biosecurity Officer (based in the Department of Agriculture).

A South Atlantic Invasive Species Strategy and Action Plan was developed at a regional meeting of the South Atlantic OTs on Ascension Island in May 2009. The strategy, which aims to provide a focus for the SAOTs to develop and implement effective prevention and response mechanisms to reduce the impact of invasive alien species (Shine and Stringer 2009), will be presented to the Falkland Islands Environment Committee in March/April 2010 and to the Executive Council thereafter for government approval.

Internal or intra-island biosecurity is coordinated by the Environmental Planning Department of FIG. Falklands Conservation, the South Atlantic Invasive Species (SAIS) project, coordinated by the Royal Society for the Protection of Birds (RSPB) on behalf of the Governments of the UK SAOTs, and FIG carried out a review of internal quarantine measures in relation to rodents. Included in this work was a report by Christie (2007) providing recommendations on quarantine and biosecurity measures to prevent the incursion of rodents to sites which are currently rodent-free. As a consequence of this work, four islands were identified as priority sites requiring special biosecurity and quarantine attention. These four islands, Carcass, Lively, the Speedwell/George/Barren group and Sea Lion islands (the last two of which are ACAP breeding sites), were selected because they are relatively large, currently rodent-free, inhabited by humans and frequently visited, thus placing them at risk with respect to rodent incursions. Island-specific Biosecurity Plans are in the process of being developed for each of these sites. The plans include actions to minimise the risk of rodent introductions, surveillance work to check for the presence of rodents (bait stations), and a contingency component to be implemented in the event of any incursions. Once the plans have been completed, the Environmental Planning Department of FIG will be responsible for facilitating their ongoing implementation and review. The development of Biosecurity Plans for the four sites identified above is seen as the first phase in the process of strengthening internal biosecurity and quarantine measures, and it is hoped that similar plans will later be developed for other sites.

FIG, the SAIS project and Falklands Conservation undertake a range of public awareness initiatives with respect to biosecurity and quarantine measures, liaising with all key stakeholder groups, including the military, government, landowners and the general public. In 2007 the FIG Ports and Harbours booklet (Falkland Islands Government 2009) was updated to highlight better relevant biosecurity measures, and a biosecurity poster was developed for the Falkland Islands Government Air Service (FIGAS) and helicopter services. One of the key challenges is to ensure a coordinated, integrated and strategic approach to both national biosecurity (transport into the islands) and intra-island biosecurity, with strong leadership from FIG. It is important to note that the biosecurity regime within the Falkland Islands also has an impact on the environment of South Georgia, as many vessels visiting South Georgia come via the Falkland Islands. This applies particularly to the biosecurity provisions in place at the Falkland Interim Port and Storage System (FIPASS), which is commonly used for mooring and storage purposes by vessels and/or cargo transshipments destined for South Georgia.

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

Most of the ACAP breeding sites in the Falkland Islands are privately owned, and so measures to minimise disturbance to ACAP species (and more broadly) must involve constructive communication and engagement with landowners, industry and various government departments. Research carried out in the Falkland Islands requires a research

permit from the FIG Environmental Planning Department, as well as permission from the relevant landowner.

*The Falkland Islands Countryside Code* was adopted by FIG in 2000/01, and provides guidelines on how to minimise disturbance and other negative impacts on the wildlife and environment of the Falkland Islands. The Countryside Code is included in all material produced for visitors to the islands. In 2006, Falklands Conservation produced a more detailed guideline document for landowners with breeding ACAP species (Yates and Crofts, 2006), an excerpt of which is provided in Appendix 5. These guidelines recommend a minimum approach distance of 6m for nesting seabirds generally, and ideally 200m, but no closer than 50m for nesting Southern Giant Petrels, which are particularly prone to disturbance in the Falkland Islands. In some cases, the 6m minimum approach distance is not practical. This is the case for some of the sites at which tourists can view Black-browed Albatrosses, where thick tussock grass on the periphery of colonies may require a closer approach. As long as people approaching such a colony of Black-browed Albatrosses are cautious and only approach as close as is necessary to view the birds, they are unlikely to be disturbed.

The Environmental Planning Department of FIG receive Post-Visit Reports (PVRs) for all IAATO (International Association of Antarctic Tour Operators) registered vessels landing at sites outside of Stanley. FIG also requires PVRs from all visits (researchers and tourists) to FIG-owned islands. The PVRs include, *inter alia*, details regarding the number of passengers, duration of visit, and places visited, and are used by FIG to compile annual statistics for reporting purposes. They also provide a mechanism for visitors to report opportunistic observations, and are used by FIG to monitor visitor numbers at particular sites.

Tourism is an increasingly important activity in the Falkland Islands, and one which needs to be encouraged and responsibly managed. Some recent examples of initiatives implemented to manage potential disturbance, especially in relation to ACAP breeding sites, include the development of a small jetty for offloading cruise ship passengers at Barren Island, the maintenance of hides to view Southern Giant Petrels at Sea Lion Island and Pebble Island, the development and implementation of a Management Plan at New Island (Strange, 2007), the construction and maintenance of a path for tourists to access and view the Black-browed Albatross colony at West Point Island, and fencing off the Black-browed Albatross colony at Grave Cove, Dunbar to protect the nesting habitat and courting and nesting birds from grazing sheep. These activities have been carried out by the landowners, with support in some cases from FIG, Falklands Conservation and local, UK and international funds, and highlight again the important role of landowners and the need for a collaborative approach to conservation management in the Falkland Islands.

#### **4.1.4 Management Plans for ACAP breeding sites**

Formal Management Plans are in place, or are under development, for a few ACAP breeding sites in the Falkland Islands. There is no standard format or guidelines for the development of site management plans in the Falkland Islands, and it is intended that this ACAP plan provides guidance on the necessary management requirements of ACAP species that could be developed into formal management recommendations and Management Plans as these are developed and reviewed.

## 4.2 Recommendations

- 4.2.1** For sites at which ACAP species breed and for which a formal Management Plan is under development (e.g. Steeple Jason, Grand Jason, Kidney Island, Sea Lion Island), ensure that these plans include a full specification of appropriate management actions in relation to the ACAP species (as outlined generally in this ACAP plan).
- 4.2.2** For sites at which ACAP species breed and which are in ownership of FIG or Conservation Organisations and Trusts, develop formal management recommendations for ACAP species at these sites, with a view to including these in comprehensive formal Management Plans in the future. Particular priorities are the remaining islands in the Jason Group and Beauchêne Island.
- 4.2.3** Once sufficient examples of agreed best-practice in respect of ACAP species at these sites (in 4.1.1 and 4.1.2) are available, the approaches therein should be discussed with owners of other sites at which ACAP species breed, with a view to developing appropriate site-specific management and species conservation practices for these sites. It is important to develop consistent and, where feasible, coordinated, standards of management approaches and implementation (at least insofar as site-specific differences permit).
- 4.2.4** Develop/strengthen and implement a formal biosecurity strategy and plan with strict quarantine measures to prevent the introduction and transfer of invasive animals, plants and diseases, especially in respect of rodents and avian diseases (for ACAP species). It is important that roles and responsibilities are clearly defined, that these actions are taken up in biosecurity/quarantine legislation and protocols and are strictly implemented, and that monitoring protocols are in place to check compliance with prescriptions. Some key biosecurity requirements for ACAP species include the following:
- a.** Ensure that islands which are currently free of rodents remain that way by implementing and expanding to other sites the Island Biosecurity Plans.
  - b.** Strengthen quarantine and surveillance protocols for vessels and aircraft arriving in the Falkland Islands.
  - c.** Ensure that strict quarantine protocols are implemented on all vessels and aircraft moving between islands, which should be expected to demonstrate that they are rodent-free.
  - d.** Revisit the suite of reports dealing with biosecurity and quarantine measures in the Falkland Islands (Simpson and Hellstrom (2004), Christie (2007) and the draft South Atlantic Invasive Species strategy, compiled after the SAIS workshop at Ascension Island in May 2009) to identify the priority actions that need to be taken forward and how these should be implemented.
- 4.2.5** Ensure robust management of biosecurity risks and disturbance associated with tourist activities.
- 4.2.6** Establish a formal mechanism for the Environmental Planning Department to provide assistance to landowners in relation to ACAP breeding sites (which could include, for example, guidelines on grazing disturbance and

management, site-specific tourism management, tourism infrastructure management, low flight zones over seabird colonies and fire management).

- 4.2.7** Maintain Post-Visit Report (PVR) system, and use information to compile an annual report for dissemination to key stakeholders.
- 4.2.8** 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 by AC5 – February 2010).
- 4.2.9** 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 by AC5 – February 2010).
- 4.2.10** Investigate impacts of House Mice on seabirds at Steeple Jason Island. Informed by this work and lessons from other sites (such as Gough Island), consider management options.
- 4.2.11** Continue monitoring the ecology of Feral Cats at New Island to ascertain their possible impact on ACAP species, especially White-chinned Petrels, at this site.

## **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. 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 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 these 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. The Species Assessments are available online (<http://www.acap.aq/acap-species>), and will be routinely updated as new material is available.

## **5.1 Current activities relating to monitoring the status and trends of ACAP-listed species in the Falkland 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 in the Falkland Islands, and are currently undertaken by a number of different individuals and organisations, including Falklands Conservation, the New Island Conservation Trust and associated researchers.

### **5.1.1 *Black-browed Albatross***

Approximately 67% of the global population of Black-browed Albatrosses breeds in the Falkland Islands at 12 distinct sites in the west and south of the archipelago. There have been sporadic censuses of Black-browed Albatrosses at some colonies (with more regular counts at New Island – see below) since 1964 (Prince 1982, Thompson and Rothery, 1991, Huin 2001, Huin and Reid 2007, Strange 2008). Archipelago-wide surveys by Falklands Conservation in 2000 and 2005 have reportedly shown a reduction in the number of breeding pairs from c. 415,000 to 400,000 during this period, a decline of 0.7% per annum (Huin and Reid, 2007). Based on estimates from the period prior to 2000, the rate of decline for the period 1995-2000 was more rapid than for the period 2000-2005, but this is based on few and patchy data. The rate of decline was not consistent between sites, and even between sub-colonies within sites, with some colonies showing an increasing trend (Huin and Reid, 2007). Three different methods were used by Falklands Conservation in their 2000 and 2005 censuses: 1) direct counting, 2) ship or ground based photo counts and 3) density and area measurements (with density estimated by means of strip transects).

Ian Strange has been conducting aerial photographic surveys of various Black-browed Albatross colonies since 1964, including archipelago-wide censuses in 1986 and 2004. In contrast to the results from the Falklands Conservation surveys, the counts from aerial photographs have reportedly shown increases of between 21 and 141% between 1986 and 2005 (Strange 2008). More regular population monitoring (using both aerial photographs and ground counts) at New Island show an increase in numbers at the Settlement Rookery of 100%, or 3.5% per annum, between 1977 and 2006 (Strange 2007).

The discrepancies in these two sets of results clearly require urgent investigation and attention, including an assessment of possible differences attributable to the census methods, timing of survey and other factors, to get the best scientific interpretation possible of historical, recent and current data. Given the different methods and approaches used and the inconsistent results obtained to date, it is also critical to set up a coordinated and standardised approach to Black-browed Albatross surveys for future and ongoing work in the Falkland Islands, using the most appropriate techniques. It is likely that a combination of site-specific techniques will be needed, together with appropriate calibration studies. This is one of the key priorities for ACAP monitoring work in the Falkland Islands.

Falklands Conservation has been carrying out annual monitoring of population trends and productivity at selected Black-browed Albatross colonies at Steeple Jason since 2004. An annual demographic study, in which all adults and chicks are banded, was initiated at Steeple Jason in 2006. The number of breeding pairs from all of the monitored sites increased by about 16% between 2005 (the date of the last archipelago-wide census) and 2008 (Pistorius 2009). Breeding success was variable during this period, ranging from 40.5% in 2005 to 61.6% in 2007; adult survival for the period 2007/08-2008/09 was estimated to be about 94% (Pistorius 2009, Falklands Conservation, unpubl. data), similar to the estimate from New Island (see below).

Breeding success and survival data have been collected annually at New Island by Paulo Catry and the New Island Conservation Trust since 2003. This work forms part of a comprehensive demographic and breeding ecology study of Black-browed Albatrosses at New Island. The average annual breeding success for the period 2004 to 2010 was  $56.4 \pm 16.6\%$ ; adult survival for the period 2003-2009 was  $93.8 \pm 2.0\%$  (P. Catry and New Island Conservation Trust, unpubl. data).

### **5.1.2 Southern Giant Petrel**

The first complete census of Southern Giant Petrels in the Falkland Islands was carried out during the 2004/2005 breeding season. In this census, the Southern Giant Petrel population was estimated to comprise just less than 20,000 pairs, breeding at 38 locations, with colony size ranging from one to 10,936 breeding pairs (Reid and Huin, 2008). Although no previous archipelago-wide censuses have been conducted, the results indicate the Southern Giant Petrel to be more numerous in the Falkland Islands than previously thought, and provide a strong indication that the population has increased since the 1950s (Reid and Huin, 2008). The results confirm the global importance of the Falkland Islands for Southern Giant Petrels, which supports approximately 40% of the global population (Patterson *et al.*, 2008, Reid and Huin, 2008). Recent analyses of trend data for the global population have been used to downlist the threat status of the species from *Near Threatened* to *Least Concern* (BirdLife International 2009).

Falklands Conservation has carried out monitoring of population trends of Southern Giant Petrels at Steeple Jason since 2000, with annual monitoring of population trends and breeding success at Steeple Jason and Sea Lion Island since 2004. The monitoring of these study colonies has indicated that the Southern Giant Petrel population at Steeple Jason Island has increased by almost 100% (from 987 pairs to 1819 pairs) between 2000 and 2008 (Pistorius

2009). Breeding success was highly variable, with an average fledging success of 49% for the period 2004-2008 (Pistorius 2009). Monitoring work at the Sea Lion Island colony may be terminated as it is proving difficult to obtain accurate counts without causing disturbance.

### 5.1.3 White-chinned Petrel

The first formal survey of all known colonies of White-Chinned Petrels in the Falkland Islands was carried out during the 2004/05 and 2005/06 breeding seasons. A total of 55 active burrows was observed at three islands: Kidney Island (27 pairs), Bottom Island in Port William (2 pairs) and New Island (26 pairs) (Reid *et al.*, 2007). The total figure should be considered a minimum estimate, especially at Kidney Island, where the very high density of burrow-nesting Sooty Shearwaters *Puffinus griseus* likely results in some White-chinned Petrel burrows being overlooked. Furthermore, it is possible that thorough surveying of other tussac islands (with suitable nesting habitat) will reveal additional White-chinned Petrel colonies. It is thought that many of the individuals observed in the waters of the Falkland Islands (White *et al.*, 2002) are from the much larger South Georgia population (Berrow *et al.*, 2000; Phillips *et al.*, 2006).

Historical estimates suggest that the population on Kidney Island was much larger (c. 1000 breeding pairs) (Woods and Woods, 1997) than was estimated in the recent census. However, the historical estimates were not based on systematic surveys, so it is difficult to compare the estimates. The colony at New Island has remained relatively stable between 1972 and 2005, in spite of the presence of Feral Cats there (Reid *et al.*, 2007). It is likely that the population of White-chinned Petrels in the Falkland Islands has always been small; it currently represents less than 1% of the global population (Reid *et al.*, 2007). Given the small population size, and the fact that it is known to suffer fisheries-related mortality, the White-chinned Petrel is at risk of becoming locally extinct.

Given the disturbance and difficulties associated with conducting detailed demographic and productivity studies on burrowing petrels, it is not considered feasible and appropriate to conduct such studies on White-chinned Petrels in the Falkland Islands. However, ongoing (occasional) monitoring of the population size, especially at Kidney and New Islands, together with surveys of other tussac islands which provide suitable habitat, would be useful.

## 5.2 Recommendations

Monitoring of the status and trends of ACAP-listed species in the Falkland 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 five to 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 (Southern Giant Petrel, and White-chinned Petrel), intensive monitoring is problematic due to logistical challenges and/or the sensitivity of the species - including nesting habitat - to disturbance. Given the

relative population sizes of the three ACAP species breeding in the Falkland Islands, the percentage contribution of the Falkland Islands population to the global population, and the conservation status of each species, it is recommended that the order of priority for monitoring the status and trends of these ACAP species is: 1) Black-browed Albatross, 2) Southern Giant Petrel and 3) White-chinned Petrel.

### ***Black-browed Albatross***

- 5.2.1 Conduct an independent assessment of the different sets of census data (from Falklands Conservation and Ian Strange/New Island Conservation Trust) to get the best scientific interpretation possible of historical, recent and current data.
- 5.2.2 Review historical and current census methodologies that have been used in the Falkland Islands, as well as methods used elsewhere, with the aim of setting up a coordinated and standardised approach to Black-browed Albatross surveys (using the most appropriate techniques) for future and ongoing work in the Falkland Islands. It is likely that a combination of site-specific techniques will be needed, together with appropriate calibration studies. This process should also determine the appropriate frequency and scope of censuses.
- 5.2.3 Maintain annual monitoring of population size and demographic parameters at Steeple Jason Island and New Island study colonies (including banding adults and chicks), ensuring sufficient sample size to estimate accurately these demographic parameters.

### ***Southern Giant Petrel***

- 5.2.4 Maintain annual monitoring of population trends and productivity at Steeple Jason Island.
- 5.2.5 Investigate the selection of additional sites for annual monitoring of population trends. These could include sites that are surveyed by means of aerial photography.
- 5.2.6 Develop and implement protocols for archipelago-wide surveys. It has been suggested that archipelago-wide censuses should take place once every five years (Reid and Huin, 2008). However, it may be more appropriate/feasible, and cost-effective, to select a number of representative sites for more frequent monitoring, and reduce the frequency of archipelago-wide counts (i.e. place more emphasis on accurate monitoring of population trends at representative sites, rather than obtaining an estimate of the entire population). Link with 6.2.8.

### ***White-chinned Petrel***

- 5.2.7 Count the number of active burrows (or apparently occupied nests) once every five years at the three known colonies, especially Kidney Island and New Island to monitor population trends (repeating the methods described in Reid *et al.* 2007). Conduct work especially carefully to ensure minimal damage is caused to the nesting habitat.
- 5.2.8 Identify islands with suitable nesting habitat, and survey for presence of White-chinned Petrels. This could be combined with other survey work in the Falkland

Islands (e.g. ongoing shorebird and Cobb's Wren surveys), or specifically planned.

## 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 overlaps 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 their data to the database so that they can be collated and used for regional analyses, especially to determine overlap between seabird distribution and fisheries effort. 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 their value as an important conservation tool (e.g. BirdLife International 2006, Phillips and Small 2007, Taylor and Small 2008). It should be noted that access to these data is subject to the approval of the data holders.

**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.

## 6.1 Current tracking and diet studies on ACAP species in the Falkland Islands

A three year intensive study of the at-sea distribution of seabirds and marine mammals around the Falkland Islands (the majority of the FICZ and FOCZ) took place between 1998 and 2001, culminating in the publication of an at-sea distribution atlas for these taxa, which include all ACAP breeding species as well as a number of non-breeding visitors (Table 2; White *et al.* 2002). Adult Black-browed Albatrosses from Saunders Island, Beauchêne Island and New Island have been tracked using loggers, satellite transmitters and GPS devices to determine at sea-distribution and assess overlap with fishing effort during the breeding season and inter-breeding period (Grémillet *et al.*, 2000, Huin, 2002, P. Catry, unpubl. data). These studies have shown that Black-browed Albatrosses from the Falkland Islands rely mainly on marine resources within the Patagonian Shelf area, which is also used extensively by a number of commercial fisheries. The foraging range of birds differs depending on the stage of the breeding cycle, with a much more restricted foraging range during chick rearing than during incubation (Huin 2002). These studies also highlight colony differences in foraging areas.

From December 2008 to January 2009, Paulo Catry and colleagues tracked 39 individual Black-browed Albatrosses during the early chick-rearing period from New Island using GPS devices. They collaborated with the Falkland Island Fisheries Department (FIFD) to use Vessel Monitoring System (VMS) data to conduct a fine-scale analysis of the overlap between the tracked birds and the fishing vessels (within the waters of the Falkland Islands). The initial results show a high degree of segregation between the study birds from New Island and fishing activities. Given the high inter-annual variation in foraging behaviour and differences between colonies, it is important to continue and expand this research by, for example, tracking birds from other colonies, at different times of the year, and targeting different age-classes, to get a more comprehensive understanding of the interactions between albatrosses and fisheries in the Falkland Islands.

Paulo Catry and colleagues intend to continue tracking adult breeders from New Island as well as from other colonies in the Falkland Islands. In 2009/10, they will be deploying GPS devices on adult breeders from Steeple Jason Island. This will enable an inter-island comparison of foraging movements, and add to the ongoing data set, which is particularly important to assess and account for inter-annual variation of foraging behaviour. Consideration is also being given to deploying geolocators on pre-breeding birds from New Island, where many banded pre-breeders have been recorded back on the island. Their tracking (and demographic) work at New Island is complemented by diet studies of Black-browed Albatrosses, using regurgitates and stable isotope analyses.

Falklands Conservation initiated a large scale exercise in April 2002 to monitor the dispersal of colour marked fledglings from Steeple Jason Island. Observations of colour marked birds from National Observer Programmes along the Patagonian Shelf indicate rapid dispersal of these immature birds away from the Falklands to the northern reaches of the Patagonian Shelf, and the waters offshore of Brazil (Sullivan *et al.* 2003). Satellite tracking of three fledglings from Steeple Jason from April to August 2007 similarly showed rapid movement of fledglings to Brazilian shelf waters (Huin 2007).

Falklands Conservation is in the process of finalising an analysis of their inshore seabird (albatross and penguin) tracking data and at sea distribution data to inform the identification of Marine Important Bird Areas (IBAs). The Marine IBA study is due to be completed towards the

end of 2009. The Shallow Marine Survey Group (SMSG), with funding from OTEP and the Falkland Islands Government, are currently implementing an inshore marine survey programme, which includes coastal and inshore bird surveys. Although this project deals specifically with the coastal and inshore environment, it will investigate the importance of transit and maintenance areas for breeding seabirds, especially the marine areas adjacent to seabird (including ACAP species) breeding sites, and will also consider the identification, designation and management of Marine Protected Areas.

Most of the tracking data collected in the Falkland Islands have been submitted to the Global Procellariiform Tracking Database. The data have recently been used in a scientific assessment of the impacts on seabirds of fisheries within the area of application of the International Commission for the Conservation of Atlantic Tunas (ICCAT) (ICCAT Sub-Committee on Ecosystems, 2009). Given the high degree of overlap of ACAP species from the Falkland Islands with ICCAT fisheries, the results of this assessment and the implementation of management recommendations to reduce bycatch levels are of critical importance (see Section 7.1). Much of the detailed tracking data for Falkland Islands' birds comes from only a few years. Given the high inter-annual variability in foraging movements, more data are needed to inform the designation of IBAs and potential Marine Protected Areas.

The Southern Giant Petrel and the White-chinned Petrel have not been tracked in the Falkland Islands. Both of these species are known to be killed as a result of incidental mortality in longline and trawl fisheries, so information on their distribution at sea and overlap with fisheries would be of value. However, given the small size of the White-chinned Petrel population in the Falkland Islands relative to the global population, and the increasing population trend and susceptibility to disturbance of Southern Giant Petrels, there are no current plans to conduct remote tracking of these species, although see action point 6.2.8.

It is considered a greater priority to continue tracking Black-browed Albatrosses to understand better inter-annual and inter-site differences in foraging movements, including collecting data on pre-breeding birds.

The abattoir dumping sites outside of Stanley currently attract vast numbers of Southern Giant Petrels who scavenge on the waste material. Plans to expand the level of production at the abattoir by three or four times are currently being considered. This increase in production and level of dumping will likely attract many more Southern Giant Petrels (and other scavengers), and possibly influence their local foraging ecology and population movements.

Paulo Catry and colleagues initiated a diet-sampling programme for Black-browed Albatrosses at New Island in 2004, and undertake this work annually, during the breeding season. Falklands Conservation plan to initiate a similar study on Black-browed Albatrosses at Steeple Jason Island, following the methods 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 *Thalassarche chrysostoma* at Bird Island, South Georgia, without any deleterious impacts on the subsequent survival or fledging mass of chicks sampled. A diet-sampling programme would provide information on the extent to which albatrosses 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.

## 6.2 Recommendations

- 6.2.1 Continue remote-tracking work at New Island and Steeple Jason Island, systematically updating and filling gaps in a prioritised manner, with particular attention to assessing interannual variability and covering all stages of breeding and life cycles.
- 6.2.2 Use GPS and other tracking data to conduct fine-scale analyses of spatio-temporal overlap of fishing effort (from VMS data) with the foraging distribution of Black-browed Albatrosses in the waters of the Falkland Islands.
- 6.2.3 Ensure all tracking data are submitted regularly and made available to the Global Procellariiform Tracking Database for use in updated analyses.
- 6.2.4 Ensure a coordinated approach to tracking work on ACAP (and other) species in the Falkland Islands.
- 6.2.5 Seek opportunities 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 Investigate the oceanographic and biological drivers of seabird distribution around the Falkland Islands, and identify foraging hotspots. Use results to provide management recommendations, including in relation to identification of potential Marine Protected Areas in Falkland Islands waters.
- 6.2.7 Following the analysis and publication of the diet data already collected, consider designing and implementing a diet-sampling programme, based on the protocols outlined in Phillips (2006).
- 6.2.8 Investigate the impact of the abattoir on the foraging ecology and movements of Southern Giant Petrels, by capturing and deploying tracking devices on some of the individuals that frequent the abattoir. Link with 5.2.6.

## 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 the Falkland Islands are particularly important for albatrosses and petrels, both those breeding on the islands, and non-breeding visitors. Given the wide-ranging nature of albatrosses and petrels, it is also important to consider and manage threats that occur outside of the jurisdictional waters of the Falkland Islands, as these pose a significant threat to Falkland Island 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 the 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.

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 Western and Central Pacific Fisheries Commission (WCPFC).

**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].

## 7.1 Current status of fisheries-related issues in the Falkland Islands and beyond

The conservation of sustainable fishery resources through effective management is a primary objective of the Falkland Islands Government. Fishing activities in and around the Falkland Islands are thus strictly regulated and managed.

There has been a multinational fishing fleet operating in the Falkland Islands since the mid 1970's. In 1987 FIG declared the Falkland Islands Interim Conservation and Management Zone (FICZ), comprising an area of 150nm from the geographical centre of the islands, and began regulating the fishery through the management of a licence system. In 1994, FIG extended this zone to 200nm to the north, east and south of the islands, thus creating the Falklands Outer Conservation Zone (FOCZ) (Figure 2).

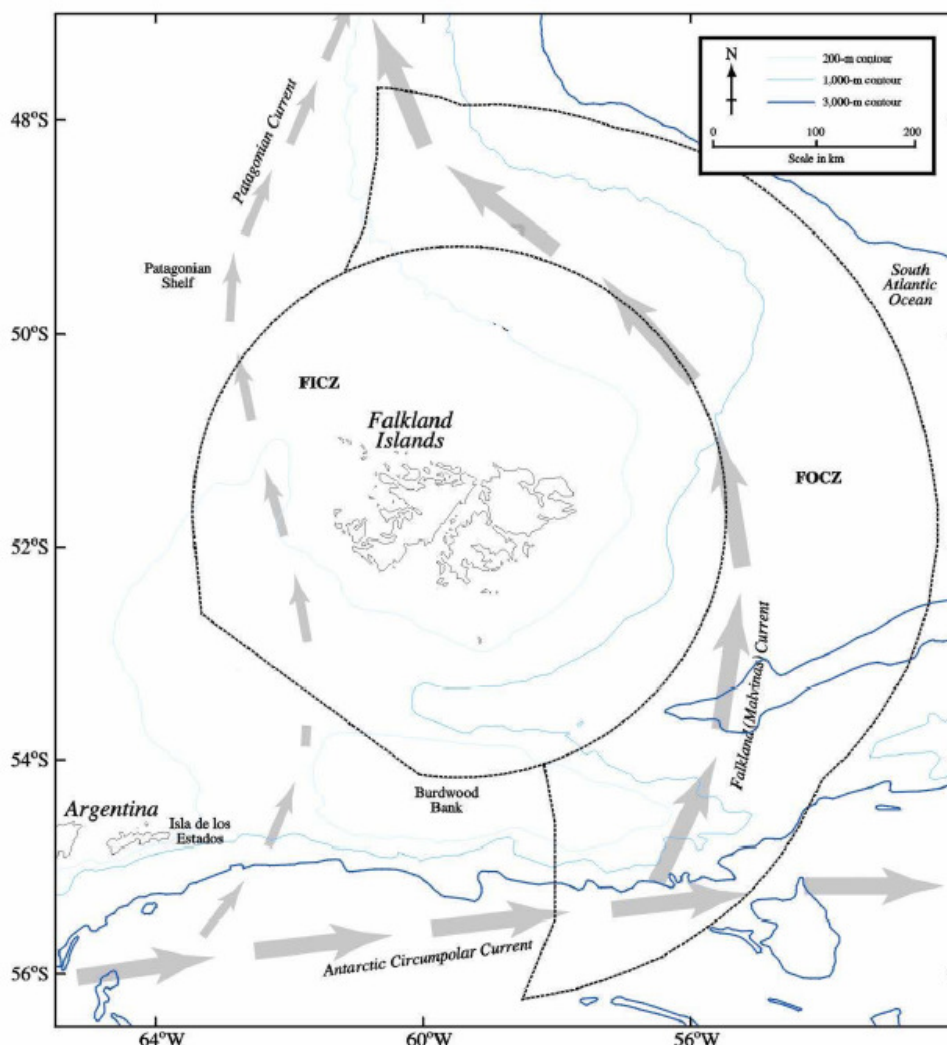
The *Fisheries (Conservation and Management) Ordinance 2005* was enacted in 2005 and gives legislative effect to a modernisation of fisheries policy, including the introduction of transferable property rights for up to 25 years and a new licensing system. The increased security through the allocation of long-term property rights is intended to encourage diversification of activities, and an increased investment in research and development (Harte and Barton, 2007a, 2007b). The Fisheries Ordinance has as a key objective that exploitation of fisheries resources and related activities are conducted in a manner consistent with the need to have regard for the impact of fishing activities on non target species and the long term sustainability of the marine environment.

The Falkland Islands fisheries target squid (*Illex argentinus* and *Loligo gahi*) and a range of finfish species, by means of jiggers, trawlers and longline vessels; potting for Patagonian Toothfish *Dissostichus eleginoides* has also been trialled. In terms of effort, the main types of fishing activity in the Falkland Islands are trawling and jigging.

Seabird bycatch has been estimated annually for longline vessels targeting Patagonian Toothfish in the Falkland Islands since 2001/2002. The Falkland Islands fisheries observer programme has reported mortality of seabirds in the longline fishery since 1994. The Falkland Islands [National] Plan Of Action-Seabirds for longliners (NPOA-L) was adopted in March 2004 with the objective of reducing seabird mortality in the longline fishery to below 0.01 birds/1000 hooks by 2004/05 and further to 0.002 birds/1000 hooks by 2006/07 (Sullivan 2004a). The estimated rate of seabird bycatch, predominantly Black-browed Albatrosses, associated with longline fishing in the Falkland Islands declined from 0.016 birds/1000 hooks in 2001/2002 to 0.005 seabirds/1000 hooks in 2003/04 (Reid and Sullivan, 2004, Otley *et al.*, 2007); the target set for 2004/05 (of less than 0.01 birds/1000 hooks) was reached in 2002/03. This was achieved due to a number of factors, including the implementation of a long-term observer programme, good house-keeping; including the correct design and use of tori line, correct line weighting regimes, bait thawing, offal management and the use of bird scaring curtains (*Brickle curtains*) over the hauling hatch. The target of 0.002 birds/1000 hooks was reached by 2005/06.

In the 2007/08 fishing season there were no seabird mortalities recorded in the longline fishery within the jurisdictional waters of the Falkland Islands, and only one seabird killed on a Falkland Islands longline vessel operating outside of the Falkland Islands EEZ (FIFD, unpubl. data). This zero mortality rate is due to the effective implementation of mitigation measures, and the recently adopted umbrella system of longlining, which poses less of a risk to seabirds

due to the more rapid sinking of the hooked line (see below). The number of seabirds recorded caught and killed in the longline fishery in 2008/09 was also zero (FIFD, unpubl. data).



**Figure 2:** Falkland Islands Interim Conservation and Management Zone (FICZ), the Falklands Outer Conservation Zone (FOCZ) and regional currents

The longline fishery in the Falkland Islands currently comprises one vessel, which has since July 2007 used the ‘cachalotera’/‘umbrella’ or ‘Chilean longline’ system, comprising a net sleeve placed on secondary vertical lines (Moreno *et al.*, 2008). Although this system was originally designed to reduce depredation of hooked fish by toothed whales, it has been shown to reduce substantially the risk of seabird bycatch as a consequence of significantly faster sink rates of the hook lines compared with traditional longline systems (Moreno *et al.*, 2008, Brown *et al.* 2009). A fisheries observer is placed on most (> 90%) longline fishing trips within the jurisdictional waters of the Falkland Islands, and is responsible for carrying out a range of responsibilities, including monitoring seabird abundance and bycatch according to standardised protocols. The 2004 NPOA-L is in the process of being updated. The revised version is due to be completed in early 2010.

Seabirds are also incidentally killed in trawl fisheries. Seabirds are generally attracted to vessels as they have learnt that the vessels are potential sources of food (discharged offal and bycatch in the case of trawlers), and are at risk of being killed as a result of interactions with trawl gear (cables/warps and the net). An estimated 1529 birds (the majority of which were Black-browed Albatrosses) were killed in 2002/03, mostly after being dragged underwater by the warp cable while feeding on factory discharge at the stern of the vessel (Sullivan *et al.*, 2006b).

In 2001/2002 Falkland Conservation's Seabirds At Sea Team (SAST) and the FIFD designed and started to test potential mitigation devices. Three mitigation devices were tested in the austral spring of 2003. The analyses indicated that tori lines were by far the most effective at reducing contact rates with the warp and thus mortality (Sullivan *et al.*, 2006).

Tori lines were subsequently adopted throughout the Falkland Islands finfish fishery. During 2004/05, subsequent to the implementation of tori lines in the finfish fishery, SAST conducted observations to establish a mortality estimate. Results indicated a reduction in seabird mortality of 90% (Reid and Edwards 2005).

The Falkland Islands [National] Plan of Action-Seabirds for trawling (NPOA-T) was adopted in 2004 (Sullivan 2004b), and was one of the first NPOA-Seabirds to be developed for trawl fisheries. Between 2004 and 2008, the Albatross and Petrel Programme of Falklands Conservation (the successor to the SAST) deployed dedicated seabird observers onboard trawlers to carry out a range of monitoring activities, and to obtain estimates of seabird mortality in the different trawl fleets (e.g. Crofts 2006a, b, c, Sancho 2009). Fisheries observers from the FIFD have also been responsible since 2006 for recording seabird mortality associated with trawlers. The most recent results are for the 2008 year, in which a minimum of 650 seabirds (mostly Black-browed Albatrosses) were estimated to have been killed in all trawl fleets operating in the Falkland Islands (Sancho 2009, Falklands Conservation and FIFD, unpubl. data). This estimate is based on the number of carcasses hauled aboard the vessel. When including the number of birds strongly suspected to have died following a heavy collision but not hauled aboard, the estimate increased to 2923 seabirds (Sancho 2009). Current evidence indicates that seabird mortality is greatest in the finfish fishery, followed by the pelagic trawl fishery; trawl vessels catching *Loligo gahi* have the smallest impact on seabirds, mostly owing to limited discharge by these vessels (compared with finfish trawlers) (Sancho 2009). The recent assessment by Falklands Conservation of seabird bycatch in the trawl fisheries has been used to inform a process of updating the NPOA-T. The revised NPOA-T was adopted by FIG in February 2010.

One of the shortcomings identified in the assessment of seabird mortality in trawl fisheries and the review of the NPOA-T was the lack of precision in the mortality estimates. The FIFD have consequently carried out an analysis to determine the sampling regime required to obtain estimates with reasonable precision, and have since the beginning of the 2009 fishing season implemented this regime, focussing particular attention and effort on the finfish fishery. This is seen as an important pre-requisite for the setting of explicit bycatch targets, and will be reviewed after the first year of implementation.

The ultimate solution to the problem of seabird bycatch associated with trawlers is the retention or strategic management of fish waste (offal and discards) (Munro 2005). In the short-term there are significant constraints to overcome this issue. These relate to the current design of trawlers, and the difficulty of fitting or modifying vessels to include facilities for onboard storage of waste or a meal plant. It is important to continue pursuing medium to long term solutions to the cause of the problem, and at the same time to investigate and implement shorter-term bycatch mitigation measures that deal with the consequence of the problem.

As has been indicated, tori lines have been found to be the most effective mitigation measure for reducing seabird bycatch in trawl fisheries in the Falkland Islands. Whilst tori lines are effective at mitigating seabird bycatch, their performance is reduced in certain conditions, especially in rough seas and strong crosswinds. Crofts (2006c) compared the performance of FIFD buoys and road cones as drag devices for tori lines, and found that dragging a cone at the end of the line resulted in increased line tension compared with the control buoys. However, Crofts (2006c) identified a number of areas which required further work (shape of the cones, bounciness in rough seas, and the difficulty of retrieving the drag device and line by one person) before a formal recommendation could be made to replace buoys with cones.

In 2008 the FIFD engaged in a process to improve the design of the standard tori line system that was being used by trawlers in the Falkland Islands at the time. The main changes to the old design were: shorter length of tori line, use of a net covered fishing float as a drag device (rather than a buoy) and an additional streamer 1 metre behind the stern of the vessel (Snell *et al.* submitted). At sea trials comparing the efficacy of the two designs showed that the modified tori line was significantly more effective than the old/current design at protecting the warp cables, reducing seabird interactions in this area, and was safer and more practical to use (Snell *et al.* submitted). The FIFD licence conditions for demersal trawlers have subsequently been amended (coming into force in July 2009) to require the use of the new/modified tori line.

The Falkland Islands *Illex* Jigging Assessment Directive was published in 2004 providing guidance for a thorough assessment of the extent and nature of the incidental catch of seabirds on squid (*Illex argentinus*) jiggers operating in the Falkland waters and the wider Patagonian shelf (Sullivan 2004c). The Jigger Directive was assessed by Falklands Conservation in 2006/07. Mortality estimates confirmed earlier fisheries observations that incidental mortality associated with this fishery is minimal (Reid *et al.*, 2006). The issue of seabird mortality resulting from jigging is inherently different to that associated with longline and trawl fishing; with jigging it is not the fishing activity itself that is problematic, but the deliberate targeting of seabirds. This is therefore not bycatch in the true sense but the desire of the crew for a variety of protein in their diet that leads to direct targeting of birds from lines deployed behind the vessel specifically for this purpose. Consequently, observers cannot accurately quantify the level of mortality (unless they were present on every vessel) because crew on a vessel will obviously refrain from such activities when an observer is present. The FIFD have undertaken to act upon any suspicion of targeting seabirds during spot checks (for example, if floating fishing gear was deployed astern or feathers and body parts found aboard). There is substantial variation in the estimates of birds killed in this manner, and it is certainly an issue that requires further investigation and attention. Education materials have been prepared by Falklands Conservation, and are disseminated in multiple languages to the jigging vessels.

A fishery protection vessel with a Fisheries Officer and an aircraft provide surveillance of the 200 nautical mile zone around the Falklands throughout the year. The level of illegal, unregulated and unreported (IUU) fishing activity in this zone is considered to be low. As a consequence, much of the fishery protection effort is focused on ensuring that vessels are complying fully with the requirements of the fishery.

All fisheries have licence conditions which include a suite of seabird bycatch mitigation measures. The FIFD implements a national observer programme, which includes close to 100% coverage of the longline fishing effort. A much lower percentage of the trawl and jigging fishing effort is covered by observers, but FIFD have recently adapted the observer programme for the finfish trawlers (considered to be one of the highest risk fisheries for seabirds) to ensure a systematic approach to sampling and thus ensure more robust estimates of seabird mortality in this fishery.

ACAP species from the Falkland Islands are also impacted by longline and trawl fishing activities outside of its EEZ - on the high seas, and within the jurisdictional waters of other countries, mainly those located along the Patagonian Shelf, such as Argentina, Chile, Uruguay and southern Brazil (e.g. Neves and Olmos 1998). 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, ICCAT is the most important RFMO for albatrosses and petrels from the Falkland Islands. Scientists from the British Antarctic Survey (BAS), the Commonwealth Scientific and Industrial Research Organisation (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 Ecosystems sub-committee 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, and related proposals by some ICCAT Contracting Parties to strengthen seabird bycatch mitigation measures, were unfortunately not fully endorsed and adopted at the ICCAT Commission meeting in November 2009, due to a block imposed by a single ICCAT member country (Japan). Given the importance of ICCAT fisheries for seabird conservation in the South Atlantic region, it is crucial that the UK and UK Overseas Territories delegations of ICCAT continue to work together with other Contracting Parties to translate the results of the recent seabird assessment into improved seabird bycatch mitigation policy and action.

## 7.2 Recommendations

A multi-pronged approach is required to eliminate or minimise bycatch of Falkland Islands' albatrosses and petrels. Firstly, it is important that rigorous management and monitoring of the various fisheries within the Falkland Islands EEZ takes place to ensure full compliance with conservation and other measures and so minimise incidental mortality of seabirds in fisheries. Because mortality is also taking place outside of the Falkland Islands EEZ, it is important that organisations and countries responsible for fisheries management in these areas (on the high seas and within the jurisdictional waters of other nations) are encouraged and assisted to reduce and ultimately eliminate seabird bycatch.

- 7.2.1** Complete the revision of the NPOA-Seabirds (Longlining), and ensure ongoing implementation and review (see also 7.2.3).
- 7.2.2** Complete the revision of the NPOA-Seabirds (Trawling), and ensure ongoing implementation and review (see also 7.2.3). In particular review data and mortality estimates at the end of the 2009/10 fishing season to assess whether the current sampling regime is sufficient, and how effective the new tori line design has been. Informed by the outcome of this review, adapt or continue the sampling regime and set progressive seabird bycatch targets.
- 7.2.3** Establish a Seabird Bycatch Committee, with representatives from the FIFD, Environmental Planning Department (EPD), Falkland Islands Fishing Companies Association (FIFCA), Falklands Conservation, New Island Conservation Trust and ACAP/JNCC), to review annually the two NPOA-Seabirds and consider other seabird bycatch issues, and report to the two relevant FIG committees: Fisheries Committee and the Environment Committee.
- 7.2.4** Ensure continued collection and annual reporting of seabird bycatch data, and that ACAP seabird bycatch data reporting requirements are met (see also 7.2.3 and 7.2.5).
- 7.2.5** Provide a summary of what bycatch data are currently being collected by observers on vessels within the Falkland Islands EEZ, with detailed information on how the fisheries are being monitored and bycatch data collected. Participate in the process to develop and test a prototype bycatch data collection form for ACAP (reporting requirement for the intersessional period up to AC5).
- 7.2.6** Continue to test improvements to the current suite of seabird bycatch mitigation measures. Support and participate in relevant bycatch mitigation research. The priority area of research for the Falkland Islands is in the trawl fisheries, including measures to deter birds from the dangerous fishing gear and offal management (see 7.2.7).
- 7.2.7** Investigate the short, medium and long-term offal management options for use in the trawl fisheries of the Falkland Islands, and adopt best practice practicable measures.

- 7.2.8** Collate information on the incidence of deliberate take of ACAP species (and other seabirds) by the jigging fleet, including possible reasons, solutions and management interventions (reporting requirement for AC5).
- 7.2.9** UK with other European Union (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.
- 7.2.10** UK to include seabird bycatch expertise at priority RFMO meetings (or at least engage experts prior to and following relevant meetings).
- 7.2.11** UK to participate actively in ACAP RFMO coordinator approach, which will be piloted in IOTC, IATTC, ICCAT and WCPFC. In this approach, it is proposed that 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 the Falkland Islands and the rest of the South Atlantic.
- 7.2.12** Use results of the 2009 ICCAT seabird risk assessment study to further develop and take forward 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.
- 7.2.13** UK to seek to work with other ACAP Parties (such as Argentina, Chile, Uruguay and Brazil) to support or initiate measures to reduce seabird bycatch within relevant RFMOs.
- 7.2.14** Work with fishing companies that operate in the Falkland Islands to ensure that successful mitigation of seabird bycatch mitigation 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.
- 7.2.15** Collaborate with other countries/organisations to help reduce bycatch (sharing of expertise and advice) and IUU fishing within and outside of the Falkland Islands EEZ.
- 7.2.16** Encourage and support initiatives by industry, governments and RFMOs to combat IUU fishing.

## **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 the ACAP 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 and other relevant 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 in the Falkland Islands**

Most of the historical and present breeding site and status and trend data on albatrosses and petrels of the Falkland Islands have and continue to be collected by Falklands Conservation, New Island Conservation Trust and individuals associated with these organisations. Most of these data have been analysed by the respective organisations and individuals and presented in various reports, management and action plans and scientific publications. Fisheries observer data, including incidental mortality of seabirds, are currently included in annual reports produced by the FIFD.

It is important to ensure that all these data are collected, reported and used in a coordinated manner, both in terms of the ACAP reporting requirements, as well as for informed decision making within the Falkland Islands. FIG, together with a number of other UK Overseas Territories (UKOTs), has recently submitted an application for funds from Defra's Darwin Initiative to implement a project to improve mechanisms and capacity for the collection and management of biodiversity information in the UKOTs and to use this information for environmental decision-making and policy.

**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.

## **8.2 Recommendations**

- 8.2.1** Contact all relevant parties to identify outstanding data and ensure that all historical and recent data on albatrosses and petrels are incorporated into the ACAP database, and that future (updated) data are captured routinely, properly maintained and submitted to ACAP.
- 8.2.2** Request all researchers (data holders) conducting research and monitoring activities on albatrosses and petrels in the Falkland Islands to make their data available to the Falkland Islands Government for inclusion in the ACAP database, subject to the ACAP rules for accessing and using such data and intellectual property rights.
- 8.2.3** Develop a mechanism for the coordinated management of ACAP and biodiversity data (including spatial data) in the Falkland Islands.
- 8.2.4** Maintain a list of research and monitoring projects of relevance to albatrosses and petrels in the Falkland Islands.
- 8.2.5** Ensure that seabird bycatch reporting requirements of ACAP are met (new protocols are currently being developed – this is the same action as in **7.2.4**).

## 9. Education and awareness

Dissemination of information and targeted training and awareness programmes are crucial to promote and support the objectives of ACAP, especially in the Falkland Islands, where most of the ACAP breeding sites are privately owned, and so management is best achieved through improved understanding and voluntary support rather than legislative protection. 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 in the Falkland Islands

Environmental education and increasing environmental awareness are priority objectives of Falklands Conservation, which are implemented in a number of ways and to a range of audiences. Seabird conservation and the problem of seabird bycatch and the effective use of mitigation measures have been the subject of a range of educational materials (e.g. videos, posters and pamphlets) that have been produced by Falklands Conservation and disseminated to fishing fleets, and the broader public. Falklands Conservation have also developed a document for owners and managers of ACAP breeding sites that provides recommendations for minimising disturbance and related impacts at these sites (see Appendix 5). A weekly conservation programme (*Conservation Conversation*) is hosted on the local radio station, featuring a range of subjects including ACAP related work.

#### 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.

Falklands Conservation also manage the *Watch Group* – a programme for children to get involved in conservation activities, and produce a range of education books, leaflets and other materials for use by the local schools, the public in general and visiting tourists.

FIG produces posters and educational leaflets dealing with biosecurity and other conservation matters. The Environmental Studies Budget of FIG has been used to fund various school outings, including to ACAP breeding sites, to raise awareness and interest in conservation issues. Although not specifically focussed on ACAP issues, the Environmental Planning Department of FIG has established a mechanism to communicate more effectively with the rural community of the Falkland Islands, including owners of ACAP breeding sites, through including a representative of the Rural Business Association (RBA) on the Environmental Committee. The RBA representative provides advice from an agricultural perspective and also disseminates information to the wider rural community on behalf of FIG.

All of the main organisations involved in ACAP work in the Falkland Islands maintain websites, which are regularly updated with information, reports, news stories, and collectively contain a wealth of information and resources aimed at increasing general awareness of the conservation importance of the Falkland Islands, as well as providing guidelines and information for those visiting the islands.

- Beaver Island LandCare Group (<http://www.southgeorgiasurveys.org/>)
- Environmental Planning Department (FIG) ([http://www.epd.gov.fk/?page\\_id=14](http://www.epd.gov.fk/?page_id=14))
- Falklands Conservation (<http://www.falklandsconservation.com/>)
- Falkland Islands Fisheries Department (FIG) (<http://fis.com/falklandfish/>)
- New Island Conservation Trust (<http://www.falklandswildlife.com/>)

## 9.2 Recommendations

- 9.2.1** Promote the objectives of ACAP through the fora and mechanisms available (e.g. school curriculum, website, meetings); identify additional mechanisms to disseminate information. Maintain the profile of the Falkland 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 in and around the Falkland Islands and elsewhere.
- 9.2.2** Establish a more formal link with the Rural Business Association of the Falkland Islands, and make use of the annual Farmer's Week activities to promote ACAP and its objectives, especially to owners of ACAP breeding sites.
- 9.2.3** Make best use of opportunities that arise as a result of outside researchers or individuals working in or visiting the Falkland Islands, by for example requesting that they present a public talk or presentation while in Stanley, and provide every opportunity for local Falkland Islanders to participate in research and monitoring activities.
- 9.2.4** Collaborate with other Parties and organisations in the development and implementation of regional and international education and awareness programmes.

- 9.2.5** Share expertise and collaborate with other South Atlantic Overseas Territories and other countries whose jurisdictional waters are important for South Atlantic albatrosses and petrels (Argentina, Brazil, Chile, Namibia, South Africa and Uruguay) 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 at regular intervals to ensure continued communication among parties and ongoing assessment of the conservation status of albatrosses and petrels in the Falkland Islands and the efficacy of actions directed at addressing threats. This will allow the Implementation Plan to be updated in response to issues identified in the review process, and for further refinement of actions and priorities, thus ensuring an adaptive management approach. The progress of the plan should be reviewed annually. In addition to reviewing formally the progress of the Implementation Plan, the annual review process will also be used for organisations/departments and individuals to provide feedback on their ACAP-related activities. Ideally, the review process should take place prior to ACAP Advisory Committee meetings and Meetings of Parties (MoPs), allowing enough time to collate the necessary information and prepare for these meetings and inform the development of the UK ACAP Implementation Report, the submission of which is required prior to MoPs. Advisory Committee meetings take place at intervals of about 18 months, and MoPs every two to three years. Once the dates of these meetings are known, the timing of the annual review of the ACAP plan should be set or adapted. A comprehensive review of the Implementation Plan should be carried out once every five years.

Given the range of individuals and organisations involved in ACAP-related work in the Falkland Islands, 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 the relevant parties, undertake the review with FIG, and email the written review document to all parties for further inputs. 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.
- 10.1.2** Conduct annual review of plan, with inputs from all parties.

## **11. Funding and prioritisation**

A range of organisations and individuals undertake ACAP-related work in the Falkland Islands. This plan covers the full range of ACAP work and serves to ensure that this work is properly integrated. FIG, together with the UK Government, has overall responsibility for meeting the ACAP objectives. FIG will never have sufficient resources to carry out (or fund) all

of the actions listed in this plan itself, and external funding will be necessary. In both cases, it is important that actions are prioritised.

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

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

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### 13. Glossary of acronyms used in the plan, and in Appendix 1

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AC	Advisory Committee of ACAP
ACAP	Agreement on the Conservation of Albatrosses and Petrels
ACo	ACAP coordinator South Atlantic Overseas Territories, JNCC
BAS	British Antarctic Survey
BILG	Beaver Island LandCare Group
BSWG	Breeding Sites Working Group of ACAP's Advisory Committee
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
Defra	Department for Environment, Food and Rural Affairs (UK)
DOA	Department of Agriculture, Falkland Islands Government
EEZ	Exclusive Economic Zone
EPD	Environmental Planning Department, Falkland Islands Government
FAO	Food and Agriculture Organisation of the United Nations
FC	Falklands Conservation
FCO	Foreign and Commonwealth Office (UK)
FICZ	Falklands Interim Conservation and Management Zone
FIDC	Falkland Islands Development Corporation
FIFCA	Falkland Island Fishing Companies Association
FIFD	Falkland Islands Fisheries Department, Falkland Islands Government
FIG	Falkland Islands Government
FIGAS	Falkland Islands Government Air Service
FIPASS	Falkland Interim Port and Storage System
FOCZ	Falklands Outer Conservation Zone
IAATO	International Association of Antarctic Tour Operators
IATTC	Inter-American Tropical Tuna Commission
IBA	Important Bird Area (BirdLife International)
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
ISPA	Eco-Ethology Research Unit, Instituto Superior de Psicologia Aplicada, Lisbon, Portugal
IUU	Illegal, Unreported and Unregulated (fishing)
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee, UK
NICT	New Island Conservation Trust
NNR	National Nature Reserve (Falkland Islands)
NPOA	(FAO) National Plan of Action for reducing bycatch of seabirds in longline (NPOA-L) and trawl (NPOA-T) fisheries
OTEP	Overseas Territories Environment Programme
PVR	Post Visit Report
RBA	Rural Business Association of the Falkland Islands
RFMO	Regional Fisheries Management Organisation
RSPB	Royal Society for the Protection of Birds (UK)
SAIS	South Atlantic Invasive Species Programme
SAOT	South Atlantic Overseas Territories
SBWG	Seabird Bycatch Working Group of ACAP's Advisory Committee
SMSG	Shallow Marine Survey Group

### **13 (cont.) Glossary of acronyms used in the plan, and in Appendix 1**

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STWG	Status and Trends Working Group of ACAP's Advisory Committee
UKOT	United Kingdom Overseas Territory
UNCLOS	United Nations Convention on the Law of the Sea
VMS	Vessel Monitoring System (used to monitor the movements of fishing vessels)
WCPFC	Western and Central Pacific Fisheries Commission
WCS	Wildlife Conservation Society

**Appendix 1: Summary of recommended actions, priority ratings, key organisations/departments, scheduling and funding arrangements for the Falkland Islands ACAP Implementation Plan. See Section 13 for a full list of acronyms**

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS*</b>	<b>TIMEFRAME</b>	<b>DETAILS</b>
<b>4.</b>	<b>Breeding Sites</b>				
4.2.1	For sites at which ACAP species breed and for which a formal Management Plan is under development, ensure that these plans include a full specification of appropriate management actions in relation to the ACAP species (as outlined generally in this ACAP plan)..	HIGH	ACo, EPD, FC, FIDC, WCS	2010/11, then ongoing	These sites include Steeple Jason, Grand Jason, Kidney Island, Sea Lion Island. This ACAP Implementation Plan should be used to inform ACAP related matters in the site Management Plans. Once the Management Plans have been adopted, it is important that they are regularly reviewed to monitor performance against set objectives and targets.
4.2.2	For sites at which ACAP species breed and which are in ownership of FIG or Conservation Organisations and Trusts, develop formal management recommendations for ACAP species at these sites, with a view to including these in comprehensive formal Management Plans, or future revisions of Management Plans, in the future. Particular priorities are the remaining islands in the Jason Group and Beauchêne Island.	HIGH	ACo, EPD, FC, NICT	2010/11, then ongoing	The guidelines provided in this ACAP plan should be used to help develop management recommendations appropriate for ACAP species and sites.
4.2.3	Once sufficient examples of agreed best-practice in respect of ACAP species at the above-mentioned sites (in 4.1.1 and 4.1.2) are available, the approaches therein should be discussed with owners of other sites at which ACAP species breed, with a view to developing appropriate site-specific management and species conservation practices for these sites.	HIGH	ACo, EPD, FC, RBA, relevant landowners	2010/11	It is important to develop consistent and, where feasible, coordinated, standards of management approaches and implementation (at least insofar as site-specific differences permit).
4.2.4	Develop/strengthen and implement a formal biosecurity strategy and plan with strict quarantine measures to prevent the introduction and transfer of invasive animals, plants and diseases, especially in respect of rodents and avian diseases (for ACAP species).	HIGH	ACo, DOA, EPD, SAIS	2010/11	Much work has already been undertaken in this area. It is important that roles and responsibilities are clearly defined, that the necessary biosecurity/quarantine actions are taken up in fit for purpose legislation and protocols and are strictly implemented, and that monitoring protocols are in place to check compliance with prescriptions.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
4.2.4a	Ensure that islands which are currently free of rodents remain that way by implementing and expanding to other sites the Island Biosecurity Plans.	HIGH	EPD, SAIS	2009/10 (for adoption of initial plans) and then ongoing	Island Biosecurity Plans are in the process of being completed for 4 sites. It is considered advisable to develop similar plans for additional sites in a progressive (prioritised manner).
4.2.4b	Strengthen quarantine and surveillance protocols for vessels and aircraft arriving in the Falkland Islands.	HIGH	EPD, DOA, FIG, FIGAS, SAIS	Ongoing	Some work has already been undertaken, but there is a need for further strengthening and coordination of measures, with a strong lead from FIG. Part of ongoing and overall biosecurity/quarantine strategy.
4.2.4c	Ensure that strict quarantine protocols are implemented on all vessels and aircraft moving between islands, which should be expected to demonstrate that they are rodent-free.	HIGH	EPD, DOA, FIG, FIGAS, SAIS	Ongoing	Part of ongoing and overall biosecurity/quarantine strategy
4.2.4d	Revisit the suite of reports and recommendations dealing with biosecurity and quarantine measures in the Falkland Islands (Simpson and Hellstorm (2004), Christie (2007) and the draft South Atlantic Invasive Species strategy, compiled after the SAIS workshop at Ascension Island in May 2009) to identify the priority actions that need to be taken forward and how these should be implemented.	HIGH	EPD, DOA, FIG, FIGAS, SAIS	2010/11	As part of a process to review, update and strengthen biosecurity and quarantine measures in the Falkland Islands.
4.2.5	Ensure robust management of biosecurity risks and disturbance associated with tourist activities.	MEDIUM	EPD, FC, NICT, FITB, SAIS, relevant landowners/managers	Ongoing	These issues should be covered by the relevant guidelines or management plans referred to in actions 4.2.1-4.2.3.
4.2.6	Establish a mechanism for the Environmental Planning Department to provide assistance to landowners in relation to ACAP breeding sites.	HIGH	ACo, EPD, FC, NICT, RBA (and ACAP landowners)	2010, then ongoing implementation	Need to understand what the greatest needs are and how support/assistance is best delivered. This could include, for example, guidelines and associated support for grazing management, site-specific tourism management, tourism infrastructure management and fire management.
4.2.7	Maintain Post-Visit Report (PVR) system, and use information to compile an annual report for dissemination to key stakeholders.	MEDIUM	EPD	Ongoing	This is considered to be a useful mechanism to obtain information regarding visitor numbers to sites, and opportunistic observations, as well as making tourists aware of conservation issues. For the information to be of value, it should be formally included in an annual reports/statistics and disseminated to interested and affected parties.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
4.2.8	Compile and maintain a list indicating the presence or otherwise of alien mammals at all ACAP breeding sites.	MEDIUM	ACo, BILG, EPD, FC, NICT (and any experts with local knowledge)	January/February 2010, then ongoing	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 (ACAP reporting requirement by AC5-February 2010).
4.2.9	Compile and maintain a list of islands from which ACAP species are known to have bred in the past, but have since been extirpated.	LOW	ACo, BILG, EPD, FC, NICT (and any experts with local knowledge)	January/February 2010, then ongoing	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 by AC5 – February 2010)
4.2.10	Investigate impacts of House Mice on seabirds at Steeple Jason Island. Informed by this work and lessons from other sites (such as Gough Island), consider management options	MEDIUM	ACo, EPD, FC, WCS	2010-2012	This activity is part of a current funding application for a cross territory project, focussed mostly at Gough Island. Whether the project is funded or not, it would be useful to keep track of mouse impact and management work at Gough Island and elsewhere (eg Macquarie Island) to inform actions at Steeple Jason.
4.2.11	Continue monitoring the ecology of Feral Cats at New Island to ascertain their possible impact on ACAP species, especially White-chinned Petrels, at this site.	MEDIUM	EPD, NICT	Ongoing	Ongoing monitoring is necessary to determine the impacts on indigenous species, consider relationships between alien predators, and determine the outcomes and likelihood of success of an eradication programme.
5.	<b>Status and Trends</b>				
	<b>Black-browed Albatross</b>				
5.2.1	Conduct an independent assessment of the different sets of census data (from Falklands Conservation and Ian Strange/New Island Conservation Trust) to get the best scientific interpretation possible of historical, recent and current data.	HIGH	ACo, EPD, FC, NICT, invited independent experts	2010/11	The different results from the two data series needs to be resolved and consensus reached on the past and current trends in the population. It would be useful to involve independent experts to assist in this process.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
5.2.2	Review historical and current census methodologies that have been used in the Falkland Islands, as well as methods used elsewhere, with the aim of setting up a coordinated and standardised approach to Black-browed Albatross surveys for future and ongoing survey work in the Falkland Islands.	HIGH	ACo, EPD, FC, ISPA, NICT, invited independent experts	2010 (to be implemented for the next archipelago wide census planned for 2010/11)	Different methods have been used to census Black-browed Albatrosses in the Falklands, which may have contributed to differences in the population trends. It is important to review the current methods, and determine a standardised approach using the most appropriate methods. It is likely that a combination of site-specific techniques will be needed, together with appropriate calibration studies. This process should also determine the optimum frequency and scope of censuses.
5.2.3	Maintain annual monitoring of population size and demographic parameters at Steeple Jason Island and New Island study colonies (including banding adults and chicks), ensuring sufficient sample size to estimate accurately these demographic parameters.	HIGH	ACo, EPD, FC, ISPA, NICT, WCS	Ongoing	Long term work has been initiated at New Island (since 2003 by ISPA and NICT) and Steeple Jason (since 2004 by FC on behalf of WCS). This work is currently funded by a number of sources, including a core contribution from FIG. It is important that these monitoring activities are maintained as long-term projects, and that FIG continue to support the work.
<b>Southern Giant Petrel</b>					
5.2.4	Maintain annual monitoring of population trends and productivity at Steeple Jason Island.	HIGH	ACo, EPD, FC, WCS	Ongoing	Ensure continuation of long-term monitoring project.
5.2.5	Investigate the selection of additional sites for annual monitoring of population trends. These could include sites that are surveyed by means of aerial photography.	MEDIUM	ACo, EPD, FC	2010/11	The study colony at Sea Lion Island has been terminated due to concerns over potential disturbance. In order to ensure the monitoring results are representative of the whole island, it would be useful to include more than one site (Steeple Jason) an ongoing monitoring programme.
5.2.6	Develop and implement protocols for archipelago-wide surveys.	MEDIUM	ACo, EPD, FC	2010/11	It has been suggested that archipelago-wide censuses should take place once every five years (Reid and Huin, 2008). However, it may be more appropriate/feasible, and cost-effective, to select a number representative sites for more frequent monitoring, and reduce the frequency of archipelago-wide counts (i.e. place more emphasis on accurate monitoring of population trends at representative sites,

					rather than obtaining an estimate of the entire population). Link with 6.2.8
	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
<b>White-chinned Petrel</b>					
5.2.7	Count the number of active burrows (or apparently occupied nests) once five years at the three known colonies, especially Kidney Island and New Island to monitor population trends.	MEDIUM	ACo, EPD, FC, ISPA, NICT	2010/11 (or possibly 2011/12), then at five year intervals thereafter.	Based on the methods described in Reid <i>et al.</i> (2007). It is important to carry out survey work very carefully as White-chinned Petrel burrows are prone to damage (nest collapse).
5.2.8	Identify islands with suitable nesting habitat, and survey for presence of White-chinned Petrels.	MEDIUM	ACo, BILG, EPD, FC, ISPA, NICT	2010/11, and ongoing	It is possible that there are additional breeding sites for White-chinned Petrels in the Falkland Islands that have not yet been surveyed. Potential islands should be identified and surveys conducted at the appropriate time of the year. This could be combined with other survey work in the Falkland Islands (e.g. ongoing shorebird and Cobb's Wren surveys), or specifically planned.
<b>6</b>	<b>Foraging range and areas</b>				
6.2.1	Continue remote-tracking work at New Island and Steeple Jason Island, systematically updating and filling gaps in a prioritised manner.	MEDIUM/HIGH	FC, ISPA, NICT, WCS	Ongoing	Much of the detailed tracking data for Falkland Island birds comes from only a few years. Given the high inter-annual variability in foraging movements, more data are needed to inform the designation of IBAs and potential Marine Protected Areas. It would be particularly useful to deploy devices (geolocators) on pre-breeding birds.
6.2.2	Use GPS and other tracking data to conduct fine-scale analyses of spatio-temporal overlap of fishing effort (from VMS data) with the foraging distribution of Black-browed Albatrosses in the waters of the Falkland Islands.	MEDIUM	EPD, FC, FIFD, ISPA, NICT	Ongoing	This work has been initiated at New Island, where the foraging distribution of adult Black-browed Albatrosses has been compared with the distribution of fishing effort. It would be very useful to continue this work to include additional years, age-classes and sites to gain a more comprehensive understanding of the interactions between Black-browed Albatrosses and local fisheries.
6.2.3	Ensure all tracking data are submitted to the Global Procellariiform Tracking Database.	MEDIUM	ACo, EPD, FC, ISPA	Ongoing	Ensure that all researchers collecting tracking data on Falkland Islands species routinely submit their tracking data to the Global Procellariiform Tracking Database, subject to intellectual property rights and user agreements.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
6.2.4	Ensure a coordinated approach to tracking work on ACAP (and other) species in the Falkland Islands.	MEDIUM	ACo, EPD, FC, FIFD, ISPA, NICT	Ongoing	There is potential for some overlap between different parties implementing tracking work. Given limited resources, it is important that the tracking work undertaken on Falkland Islands species is coordinated and responds to priority gaps/needs.
6.2.5	Seek opportunities 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	ACo, FC, ISPA	Ongoing	Collaboration useful to monitor the status of regional and global populations (e.g. collaboration with colleagues from South Georgia and Chile for Black-browed Albatross).
6.2.6	Investigate the oceanographic and biological drivers of seabird distribution around the Falkland Islands, and identify foraging hotspots. Use results to provide management recommendations, including in relation to identification of potential Marine Protected Areas in Falkland Islands waters.	MEDIUM	ACo, EPD, FC, FIFD, ISPA, NICT	2011 and then ongoing	Some work is already underway by ISPA. A PhD student with BAS is currently undertaking a project using existing tracking and at-sea distribution data together with oceanographic/productivity data to identify foraging hotspots around South Georgia using advanced spatial modelling techniques. Once tested/refined it would be useful to test this approach in the Falkland Islands.
6.2.7	Following the analysis and publication of the diet data already collected, consider designing and implementing a diet-sampling programme. Design and implement a diet sampling programme, based on the protocols outlined in Phillips (2006).	MEDIUM/LOW	ACo, EPD, FC, ISPA, NICT, WCS	2010/11 (investigate feasibility and design programme), and then ongoing (once every three years) if feasible	This approach is already being implemented by ISPA/NICT on Black-browed Albatrosses at New Island. FC plan to initiate a similar monitoring programme on Black-browed Albatrosses at Steeple Jason Island and Beauchêne Island in the 2010/11 breeding season.
6.2.8	Investigate the impact of the abattoir on the foraging ecology and movements of Southern Giant Petrels. Link with 5.2.6.	LOW	Aco, EPD	2010-2012	There is a possibility that the abattoir will be increasing their production substantially in the next few years, and it is anticipated that this may have an impact on the foraging ecology and movements of Southern Giant Petrels in the Falkland Islands, which would be useful to monitor. Although Southern Giant Petrels are not considered to be a priority ACAP species for tracking work in the Falklands, it would be useful to determine the impact of the abattoir and its possible expansion on the foraging ecology and movements of birds.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
7	<b>Fishery-related issues</b>				
7.2.1	Complete the revision of the NPOA-Seabirds (Longlining), and ensure ongoing implementation and review (see also 7.2.3).	HIGH	ACo, EPD, FC, FIFCA, FIFD	2010 and then ongoing	Revised plan due for completion early 2010.
7.2.2	Complete the revision of the NPOA-Seabirds (Trawling), and ensure ongoing implementation and review (see also 7.2.3).	HIGH	ACo, EPD, FC, FIFCA, FIFD	2010	In particular review data and mortality estimates at the end of the 2009/10 fishing season to assess whether the current sampling regime is sufficient, and how effective the new tori line design has been. Informed by the outcome of this review, adapt or continue the sampling regime and set progressive seabird bycatch targets
7.2.3	Establish a Seabird Bycatch Committee, with representatives from the FIFD, EPD, FIFCA, FC, NICT/ISPA and ACAP/JNCC, to review annually the two NPOA-Seabirds and consider other seabird bycatch issues, and report to the two relevant FIG committees: Fisheries Committee and the Environment Committee.	HIGH	ACo, EPD, FC, FIFCA, FIFD, NICT/ISPA	2010 and then annual implementation	The purpose of this Committee would be to review progress of the two NPOAs (trawl and longlining), and consider other seabird bycatch issues as they emerge, so as to ensure an informed approach to the issue of minimising seabird bycatch.
7.2.4	Ensure continued collection and annual reporting of seabird bycatch data, and that ACAP seabird bycatch data reporting requirements are met (see also 7.2.3 and 7.2.5).	HIGH	ACo, FIFD	Ongoing	These data are currently reported in FIFD annual reports, and should also be reported regularly to the Seabird Bycatch Working Group of ACAP (see 7.2.5)
7.2.5	Provide a summary of what bycatch data are currently being collected by observers on vessels within the Falkland Islands Conservation Zones, with detailed information on how the fisheries are being monitored and bycatch data collected. Participate in the process to develop and test a prototype bycatch data collection form for ACAP.	HIGH	ACo, FIFD	2010	This is a reporting requirement for AC5. The first phase of this process is to provide metadata on what sort of bycatch data are collected and what percentage of the fishing effort is formally observed (mid December 2009). Following this, a prototype data collection form will be developed and tested to ensure a standardised approach to bycatch data reporting by all parties.
7.2.6	Continue to test improvements to the current suite of seabird bycatch mitigation measures. Support and participate in relevant bycatch mitigation research. The priority area of research for the Falkland Islands is in the trawl fisheries, including measures to deter birds from the dangerous fishing gear and offal management (see 7.2.7).	HIGH	ACo, EPD, FC, FIFD, FIFCA	Ongoing	The Falkland Islands (government, NGOs and industry) has been at the forefront of developing and testing seabird bycatch mitigation measures, and continues to be actively involved in this area of work. Ongoing research and development will continue to improve the efficacy of practicable cost effective measures to minimise seabird

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	bycatch further. <b>DETAILS</b>
7.2.7	Investigate the short, medium and long-term offal management options for use in the trawl fisheries of the Falkland Islands, and adopt best practice practicable measures.	HIGH	ACo, EPD, FC, FIFD, FIFCA	2010/11 then ongoing	It is acknowledged that offal management is ultimately the most effective means of dealing seabird bycatch in trawl fisheries, but that there are practical constraints to implementing structural changes to vessels in the short-medium term. It remains important to consider the various options, including shorter-term options such as strategic offal management (where discharge is prohibited during hauling and setting of nets), already required in some trawl fisheries.
7.2.8	Collate information on the incidence of deliberate take of ACAP species (and other seabirds) by the jigging fleet, including possible reasons, solutions and management interventions (reporting requirement for AC5).	MEDIUM	ACo, FC, FIFD, FIFCA	2010	Some work has already been undertaken in this area (by FC and FIFD), and whilst difficult to quantify, information is required by ACAP on the incidence of deliberate take of ACAP species by fishing fleets, together with possible reasons and solutions. Information is required by February 2010.
7.2.9	UK with other European Union (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	ACo, Defra, FCO, FIFD, JNCC	Ongoing	Need a coordinated and joined up approach to ensure seabird bycatch issues are strongly motivated and supported at RFMO meetings and in the international arena generally. Also need to engage with other ACAP parties as part of the ACAP-RFMO interaction plan.
7.2.10	UK to include seabird bycatch expertise at priority RFMO meetings (or at least engage experts prior to and following relevant meetings).	HIGH	ACo, Defra, FCO, FIFD, JNCC	Ongoing	At the priority RFMO meetings (such as ICCAT), the UK and OT delegations should ideally include seabird bycatch expertise, or at least ensure thorough interaction with experts prior to and following the meeting.
7.2.11	UK to participate actively in ACAP RFMO coordinator approach, which will be piloted in IOTC, IATTC, ICCAT and WCPFC.	HIGH	ACo, Defra, FCO, FIFD, JNCC	Ongoing	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 the Falkland Islands and the South Atlantic generally.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
7.2.12	Use results of the 2009 ICCAT seabird risk assessment study to further develop and take forward 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	ACo, Defra, FCO, FIFD, JNCC	2010 then ongoing	Recommendations arising from the 2009 seabird assessment were not formally adopted at the 2009 ICCAT Commission meeting. Given the importance of this RFMO for South Atlantic seabirds, it is critical that the UK (and EU) works with other parties to get stronger seabird bycatch mitigation measures adopted at the 2010 Commission meeting. Coordinate with other ACAP parties as envisaged in the ACAP-RFMO interaction plan.
7.2.13	UK to seek to work with other ACAP Parties (such as Argentina, Chile, Uruguay and Brazil) to support or initiate measures to reduce seabird bycatch within relevant RFMOs.	HIGH	ACo, Defra, FCO, FIFD, JNCC	Ongoing	Need a coordinated and joined-up approach to seabird bycatch at RFMO meetings. ACAP provides an opportunity/mechanism to achieve this coordination and collaboration between countries that are Parties to the Agreement.
7.2.14	Work with fishing companies that operate in the Falkland Islands to ensure that successful mitigation of seabird bycatch mitigation 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.	MEDIUM	FIFCA, FIFD	Ongoing	Encourage fishing companies whose vessels implement successful mitigation measures in Falklands waters to adopt the same approach when they are fishing in other areas where bycatch is a problem.
7.2.15	Collaborate with other countries/organisations to help reduce bycatch (sharing of expertise and advice) and IUU fishing within and outside of the Falkland Islands EEZ.	MEDIUM	ACo, FIFD	Ongoing	FIFD has considerable experience in the areas of fisheries protection and bycatch mitigation, as does the Government of South Georgia and the South Sandwich Islands, which would be useful to share, including with other countries/authorities, and thus contribute towards an improved regional approach to these issues.
7.2.16	Encourage and support initiatives by industry, governments and RFMOs to combat IUU fishing.	MEDIUM	Defra, FCO, FIFCA, FIFD	Ongoing	
<b>8</b>	<b>Data acquisition and management</b>				
8.2.1	Survey all relevant parties to identify outstanding data and ensure that all historical and recent data on albatrosses and petrels are incorporated into the ACAP database, and that future (updated) data are captured routinely, properly maintained and submitted to ACAP.	HIGH	ACo, EPD, FC, ISPA, NICT, WCS	2010 and ongoing	The ACAP database serves as a repository for data relating to the status and trends of ACAP species at all breeding sites, as well as the presence and extent of threats, and information about management actions. The database needs to be regularly updated to allow regional analyses to be undertaken.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
8.2.2	Request all researchers/data holders conducting research on albatrosses and petrels in the Falkland Islands to make their data available to the Falkland Islands Government for inclusion in the ACAP database, subject to the ACAP rules for accessing and using such data and intellectual property rights.	HIGH	EPD	Ongoing	To ensure that albatross and petrel data collected by researchers in the Falkland Islands is submitted to FIG and ACAP so that it can be used for management purposes.
8.2.3	Develop a mechanism for the coordinated management of ACAP and biodiversity data (including spatial data) in the Falkland Islands.	MEDIUM	ACo, EPD, FC, ISPA, NICT,	2010-2013	This will likely be taken up in a project for which funding is currently being sought (from the Darwin Initiative). Whether funding is obtained or not, it would still be useful to establish such a mechanism.
8.2.4	Maintain a list of research and monitoring projects of relevance to albatrosses and petrels in the Falkland Islands.	LOW	ACo, EPD, FC, FIFD, ISPA, NICT	Ongoing	EPD maintain a list of approved research projects on their website. Research at specific sites, such as New Island and Steeple Jason, is also listed on the websites of the organisations involved. Would be useful to maintain this.
8.2.5	Ensure that seabird bycatch reporting requirements of ACAP are met (new protocols are currently being developed – this is the same action as in 7.2.4).	HIGH	ACo, FIFD	Ongoing	
9	<b>Education and awareness</b>				
9.2.1	Promote the objectives of ACAP through the fora and mechanisms available (e.g. school curriculum, website, meetings); identify additional mechanisms to disseminate information. Maintain the profile of the Falkland 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 in and around the Falkland Islands and elsewhere.	MEDIUM-HIGH	ACo, EPD, FC, FIFD, ISPA, NICT, WCS	Ongoing	Specific education and public awareness initiatives will be presented in the annual ACAP Implementation report. The annual review of the ACAP Implementation Plan could serve as an opportunity to identify specific opportunities.
9.2.2	Establish a more formal link with the Rural Business Association of the Falkland Islands, and make use of the annual Farmer's Week activities to promote ACAP and its objectives, especially to owners of ACAP breeding sites.	HIGH	ACo, EPD, RBA	Ongoing	This would serve to make rural landowners, especially those with ACAP breeding sites, aware of ACAP, its objectives, and to identify opportunities for collaboration/engagement.

	<b>ACTIONS</b>	<b>PRIORITY</b>	<b>ORGANISATIONS</b> *	<b>TIMEFRAME</b>	<b>DETAILS</b>
9.2.3	Make best use of opportunities that arise as a result of outside researchers or individuals working in or visiting the Falkland Islands, by for example requesting that they present a public talk or presentation while in Stanley, and provide every opportunity for local Falkland Islanders to participate in research and monitoring activities.	MEDIUM	EPD, FIFD	Ongoing	There are a number of opportunities. For example, requesting that researchers present a public talk or presentation while in the islands, and provide every opportunity for residents of the Falkland Islands to participate in research and monitoring activities.
9.2.4	Collaborate with other parties and organisations in the development and implementation of regional and international education and awareness programmes.	MEDIUM	ACo, EPD, FC, FIFD, ISPA, NICT, WCS	Ongoing	
9.2.5	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.	MEDIUM	ACo, EPD, Defra, FC,FCO, FIFD, ISPA, NICT, WCS	Ongoing	Due to their wide ranging movements, the conservation of albatrosses and petrels from the Falkland Islands 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 ACo has drafted a strategy to encourage and work with other countries on this issue, which provides 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.	HIGH	ACo, EPD, FIFD	2010 and then annual review	Need to establish a formal and efficient monitoring and reporting framework that links with the ACAP progress indicators.
10.1.2	Conduct annual review of plan, with inputs from all relevant organisations and individuals.	HIGH	Coordinated by ACo with input and participation by all organisations and individuals involved in ACAP work	Annually	Required for organisations to provide feedback of their activities and to monitor progress of the plan. Review process to take place via email.

\* Lists the key organisations that should be involved in driving forward each activity. In many cases, the target audience will be much wider, including the general public. See Section 13 for a list of acronyms

## **Appendix 2: ACAP listed species (2009)**

<b>Common name</b>	<b>Scientific name</b>	<b>IUCN status (2010)</b>
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 eremite</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 in the Falkland Islands.** The species codes are as follows: BBA- Black-browed Albatross, SGP – Southern Giant Petrel, WCP – White-chinned Petrel. NNR (Protection Status) – National Nature Reserve.

Island/Breeding site	Island Size (ha) <sup>4</sup>	Protection status	ACAP species	Ownership	Remarks
Barren Island	1150		SGP	Private	
Beauchêne Island	170	NNR	BBA, SGP	Government	
Beaver Island Group: Governor Island	220		SGP	Private	
Beaver Island Group: Penn Island	155		SGP	Private	
Bird Island	120	NNR	BBA	Government	
Bleaker Island	2070	NNR	SGP	Private	
Bottom Island (Port William)	8		WCP	Government	
Burnt Islet	4		SGP	Private	
Carcass Island	1894		SGP	Private	
Dyke Island	1500		SGP	Private	
East Falkland, Black Rincon	< 1		SGP	Private	Berkeley Sound
East Falkland, Cape Dolphin	< 1	NNR	SGP	Private	
East Falkland, Driftwood Point	< 1		SGP	Quasi-government <sup>#</sup>	North Arm
East Falkland, False Bull Point	< 1		SGP	Quasi-government <sup>#</sup>	North Arm
East Falkland, Fanny Point	< 1		SGP	Quasi-government <sup>#</sup>	North Arm
East Falkland, Motley Point	< 1		SGP	Quasi-government <sup>#</sup>	Walker Creek
East Falkland, Rincon Grande	< 1		SGP	Private	
Elephant Cays: Golden Knob Island	1.5		SGP	Private	
Elephant Cays: Sandy Cay	80		SGP	Private	
George Island	2400		SGP	Private	
Jason Island Group: Elephant Jason	260	NNR	BBA	Government	
Jason Island Group: Grand Jason	1380		BBA, SGP	Private Conservation Organisation	
Jason Island Group: Jason West Kay	22	NNR	SGP	Government	
Jason Island Group: South Jason	375	NNR	BBA	Government	
Jason Island Group: Steeple Jason	790		BBA, SGP	Private Conservation Organisation	
Keppel Island	3626		BBA	Private	
Kidney Island	15	NNR	WCP	Government	
Lively Island	5585		SGP	Private	
Low Island (Byron Sound)	75		SGP	Private	
New Island Group: New Island	2363	NNR	BBA, WCP	Conservation Trust	
New Island Group: North Island	75		BBA	Private Conservation Organisation	
Pebble Island	10336		SGP	Private	
Saunders Island	8500		BBA	Private	

<sup>4</sup> Island size for whole island, except for the main islands of East and West Falklands, where the size provided is for the actual breeding site

**Appendix 3 (cont.): ACAP breeding sites in the Falkland Islands.** The species codes are as follows: BBA- Black-browed Albatross, SGP – Southern Giant Petrel, WCP – White-chinned Petrel. NNR (Protection Status) – National Nature Reserve.

Island/Breeding site	Island Size (ha) <sup>5</sup>	Protection status	ACAP species	Ownership	Remarks
Sea Lion Island	905		SGP	Quasi-government <sup>#</sup>	
Speedwell Island	5150		SGP	Private	
Swan Island	1375		SGP	Private	
Third Passage Island	80		SGP	Private	King George Bay
West Falkland, Hope Point	< 1		SGP	Private	Dunbar farm
West Falkland, Rookery Point	< 1		SGP	Private	Albamarle
West Falkland, Grave Cove	< 1		BBA	Private	Dunbar farm
West Island	110		SGP	Private	Cape Orford
West Point Island	1255		BBA	Private	

<sup>#</sup> - Sites managed by quasi-government organisations primarily for purposes other than conservation (mainly agriculture and tourism) are treated separately from FIG owned land that is managed for conservation

#### Appendix 4: Assessment of threats identified at ACAP breeding sites of the Falkland Islands

Breeding site	Key species	Threat subcategory	Threat species	Scope	Severity	Level	Current management action
New Island	White-chinned Petrel	Predation by alien species	Feral Cat	Very High	Low	Low	Continue monitoring

<sup>5</sup> Island size for whole island, except for the main islands of East and West Falklands, where the size provided is for the actual breeding site

## Appendix 5: Recommendations for landowners with breeding colonies of ACAP species (excerpt from Yates and Crofts 2006)

- Southern Giant Petrels in the Falkland Islands are much more sensitive to disturbance than in other breeding localities. For this reason we suggest that extra care is taken with this species.
- Where Giant Petrels are nesting a distance of 200m should be maintained and certainly no closer than 50m;
- The suggested distance of 6m is recommended for Black-browed Albatross\*;
- Extra caution should be taken during the egg, hatching and small chick periods (October to January);
- If necessary, the best time to move close to colonies is during the large chick period, after February. At this stage the chicks are more capable of fending off predators;
- The pre-fledging period is also sensitive. Colonies should be completely avoided wherever possible during April;
- During sensitive periods or with larger visitor numbers, a larger distance is always preferable;
- Burrowing petrel nests are susceptible to trampling. Care should be taken to avoid burrows at all times of the year;
- Do not block seabird sea-access paths or take-off areas;
- Avoid making any sudden or loud noises in the vicinity of seabird colonies. This includes car doors, motorbike engine noise, shouting, whistling, etc;
- Camera flashes should be turned off – they are seldom of use outside anyway;
- Helicopter flights should be restricted to agreed flight paths, ensuring respectable distances from all seabird colonies;
- Dogs should be kept away from seabird colonies;
- Avoid close approach to nest sites during December, especially the first two weeks;
- Avoid Giant Petrel colonies wherever possible.

The full document can be downloaded from:

<http://www.falklandsconservation.com/conservation/savingseabirds/AlbatrossAndPetrelBreedingSiteGuidelines.pdf>

\* In some cases, where thick tussock grass obscures the colony, a closer approach may be necessary. In such circumstances, it is still advisable to adopt a cautious approach, and only go as close as is necessary to view the nesting albatrosses.