Summary Conservation Action Plan for Wandering, Black-browed and Grey-headed Albatrosses Breeding at South Georgia (2016-2020)





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Foreword by HM Commissioner for South Georgia & the South Sandwich Islands

Albatrosses are some of the most iconic species in the Southern Ocean and South Georgia is home to globally significant populations of Wandering, Black-browed and Grey-headed Albatross. Despite being well protected within the Territory, both on land and at sea in our Marine Protected Area, these populations are in decline. The evidence suggests that incidental mortality (bycatch) in fisheries outside South Georgia waters is the greatest threat.

In order to prompt a change in the conservation fortunes of South Georgia's albatrosses, the Government of South Georgia & the South Sandwich Islands has developed a series of Conservation Action Plans. These plans recognise that, given the wide-ranging habits of the species, it is only through a concerted, collaborative, multi-national effort involving a variety of organisations that meaningful change can be delivered.

A number of opportunities for collaboration and support are highlighted in the Conservation Action Plans. In particular, we are grateful for the role played by the British Antarctic Survey in long-term monitoring and research into albatross on South Georgia and to colleagues in the UK Government who represent South Georgia at international fora where albatross conservation is discussed and actions agreed. The UK Government has fully supported the development of these Action Plans, and has indicated that it will support implementation, as appropriate. We also look forward to working with non-governmental organisations such as BirdLife International who have made great strides in tackling marine-based threats and raising public awareness about the plight of the species.

The ambitious aim of the Conservation Action Plans is to ensure that by 2020 the decline in South Georgia albatross populations will have been arrested and, in some cases, will have started to show signs of recovery. We are committed to engaging and working in partnership with those who share this goal to conserve these species for future generations.

HE Colin Roberts CVO

Foreword by the Chief Executive, Royal Society for the Protection of Birds (RSPB)

Over a third of the world's albatross populations breed on the UK's Overseas Territories, giving jurisdictions such as South Georgia & the South Sandwich Islands a global responsibility for some of the planet's most beloved wildlife. These charismatic and long-lived ocean wanderers hold a special fascination for mankind, and South Georgia is rightly renowned amongst travellers for the opportunity it offers to see these birds in a remarkable setting.

The albatrosses of South Georgia have long acted as sentinels for global albatross populations, and it was the rapid and extremely worrying declines occurring on South Georgia which prompted BirdLife International to launch its 'Save the Albatross' campaign in 2000, and the RSPB to establish an 'Albatross Task Force' in 2006. The Government of South Georgia & the South Sandwich Islands, working in collaborative partnership with the fishing industry, quickly established itself as a world-leader in all but eliminating seabird bycatch from the entire 1 million plus square kilometres of its maritime zone. We have regarded this as a pivotal case study in our work with fisheries worldwide.

South Georgia was thus the inspiration for the RSPB's global efforts, yet the latest monitoring results on the island reveal a mixed picture. After many years of decline, it is very encouraging that the Wandering Albatross population appears to have stabilised. However, the 44% decline in the Grey-headed Albatross population in the last 11 years alone shows that there is no room for complacency, and that further efforts are urgently required.

Therefore, it is exemplary that the Government of South Georgia & the South Sandwich Islands is now looking beyond the boundaries of its marine zone in order to address the loss of its albatrosses on the high seas. These Conservation Action Plans have the right focus of aiming to identify and implement additional actions which will create the necessary stepchange in the fortunes of these birds.

We are delighted to welcome their publication, and strongly support the intention of the Government of South Georgia & the South Sandwich Islands to ensure their successful implementation.

Dr. Mike Clarke

1. Introduction

South Georgia is a globally important breeding site for seabirds, including the Wandering Albatross *Diomedea exulans*, Black-browed Albatross *Thalassarche melanophris* and Greyheaded Albatross *T. chrysostoma*. These species are all listed under the Agreement on the Conservation of Albatrosses and Petrels (ACAP), which the United Kingdom (UK) ratified in 2004, and extended to the relevant Overseas Territories, including South Georgia & the South Sandwich Islands. All three of these species are classified as globally Threatened or Near-Threatened by the International Union for the Conservation of Nature (IUCN), mainly as a result of incidental mortality in commercial fishing operations.

South Georgia currently supports the third largest breeding population of the **Wandering Albatross**, after the Prince Edward and Crozet islands. The majority of the South Georgia population is located in the northwest of the archipelago and on Annenkov Island, with a handful of sites supporting small numbers of birds at the southwest tip of the archipelago (Fig. 1).



Figure 1: Breeding locations of the Wandering Albatross at South Georgia with inset map showing the location of South Georgia and the Scotia Sea

The majority of the global breeding population of the **Black-browed Albatross** occurs in the Falklands (c. 72%), the islands of southern Chile (c.19%) but a significant population also breeds at South Georgia (c. 8%). The Black-browed Albatross is known to breed at about 20 locations on the mainland and offshore islands of South Georgia, sometimes in mixed colonies with the Grey-headed Albatross. The majority of these breeding sites are located in the northwest of the archipelago, with fewer sites in the south and southeast (Fig. 2).



Figure 2: Breeding locations of the Black-browed Albatross at South Georgia. The position of Clerke Rocks (breeding location 22) is outside the area shown on the map: some 55 km southeast of the main island.

South Georgia hosts approximately half of the global population of the **Grey-headed Albatross**, the remainder breeding at Crozet, Kerguelen and the Prince Edward islands in the southern Indian Ocean, Macquarie and Campbell islands in the South Pacific, and Diego Ramirez and Ildefonso in southern Chile. At South Georgia, the Grey-headed Albatross breeds at nine locations, sometimes in mixed colonies with the Black-browed Albatross. All of these breeding sites are located in the northwest of the archipelago, with the largest colonies on Bird Island, the Willis Islands and the Paryadin Peninsula (Fig. 3).



Figure 3: Breeding locations of the Grey-headed Albatross at South Georgia.

All three species are long-lived, have high adult survival rates, delayed sexual maturity and lay single-egg clutches. The Wandering and Grey-headed Albatross breed biennially if successful in raising a chick. The Black-browed Albatross breeds annually, although 25-33% of breeders at South Georgia defer breeding the following year.

1.1 Population trends and conservation status of South Georgia albatrosses

The majority of monitoring and research on albatrosses at South Georgia has been carried out by the British Antarctic Survey (BAS) at Bird Island. This research was initiated by Lance Tickell in the late 1950s, and has been continued by BAS from the early 1970s to the present day. Demographic monitoring of ringed birds has been conducted annually since 1975, and represents one of the longest and most comprehensive studies of albatrosses globally. These long-term demographic studies have been used to monitor the trends in the numbers of birds breeding at Bird Island and the demographic processes and mechanisms (e.g. survival, recruitment and breeding success) associated with the observed trend. The population monitoring at Bird Island has been complemented by archipelago-wide surveys of Wandering, Black-browed and Grey-headed albatrosses in the 1980s, 2003/04 and most recently in 2014/15.

1.1.1 Wandering Albatross

Long-term monitoring by BAS of the Wandering Albatross population at Bird Island, which supports the majority (ca. 60%) of the total South Georgia population, shows a long term population decrease beginning in the 1960s (Fig. 4). The rapid decline in numbers between the mid 1990s and the mid 2000s (>4% per annum) appears to have ceased, with numbers relatively stable over the last 7-8 years, albeit at a substantially reduced level compared with the number of breeding pairs present in the 1960s and with no signs yet of a recovery in numbers.



Figure 4: Population trend of the Wandering Albatross at Bird Island, South Georgia. Data provided by British Antarctic Survey (BAS).

The archipelago-wide surveys show that the long-term decline of the Wandering Albatross at Bird Island is similar to the rest of the island group, with a decrease of 18% in the number of birds breeding annually between 2003/3004 and 2014/15. Globally, the Wandering Albatross is listed as **Vulnerable** to extinction by the IUCN. Considered as a regional and biogeographic unit, the long-term decline of the South Georgia population meets the IUCN criteria for **Endangered**, highlighting the parlous state of the Wandering Albatross population at South Georgia relative to the other breeding populations.



Wandering Albatross. Photo credit - Anton Wolfaardt

1.1.2 Black-browed Albatross

The Black-browed Albatross population at Bird Island has shown a long-term decline in breeding numbers since the mid-1970s (Fig. 5). The archipelago-wide surveys indicate a decrease of the total South Georgia population by 18% (or 1.8% per annum) between 2003 and 2014. In sharp contrast to the South Georgia population, Black-browed albatrosses breeding at the Falkland Islands and southern Chile have shown substantial increases over the last decade or so. These increases have been attributed to reduced levels of seabird bycatch, and in the case of the Falklands population is also thought to be associated with favourable feeding conditions. That the Black-browed Albatross population at South Georgia continues to decline, suggests that, in contrast to the populations in the Falkland Islands and southern Chile, at least some of the fisheries they encounter remain a threat, that other factors are affecting the population, or a combination thereof. Due largely to recent data on the population increase in the Falkland Islands, the global threat status of the Black-browed Albatross was reduced from Endangered to **Near-Threatened**. Notwithstanding the

improved global conservation status of the Black-browed Albatross, the South Georgia population has remained in decline, continuing a negative trend from the 1970s.



Figure 5: Population trends of the Black-browed Albatross at three study colonies at Bird Island, South Georgia. Data provided by British Antarctic Survey (BAS).



Black-browed Albatross. Photo credit - Anton Wolfaardt

1.1.3 Grey-headed Albatross

The numbers of the Grey-headed Albatross breeding at Bird Island have decreased at Bird Islands since the mid 1970s (Fig. 6), with annual counts of eleven study colonies showing an average decline of 3.6% per year between 1994/95 and 2014/15. The archipelago-wide surveys conducted in 2003/04 and 2014/15 indicate that numbers of Grey-headed Albatrosses at all surveyed locations combined declined by 44% over this 11 year period. The average rate of decline between 2003 and 2014 (5.1% per annum) represents an acceleration of the negative trend estimated between 1985/86 and 2003/04. In 2013, the global threat status for the Grey-headed Albatross was increased from Vulnerable to **Endangered** due largely to the persistent decline of the globally important population at South Georgia.



Figure 6: Population trends of the Grey-headed Albatross at two colonies monitored at Bird Island, South Georgia, for which the longest time-series are available. Data provided by British Antarctic Survey (BAS).



Grey-headed Albatross. Photo credit – Andy Black

Due to the long-term declines, the South Georgia populations of these three species are all included in the list of ACAP high priority populations. In order to strengthen and co-ordinate efforts to improve the conservation status of Wandering, Black-browed and Grey-headed albatrosses breeding at South Georgia, the Government of South Georgia & the South Sandwich Islands (GSGSSI) has developed detailed Conservation Action Plans for each of these populations. The Conservation Action Plans are intended to serve as a framework to guide, in an informed, prioritised and co-ordinated manner, actions required to improve the conservation status of these three albatross populations at South Georgia (and globally). The full plans are available at www.gov.gs/albatross-action-plans. The purpose of this document is to provide a summary of the main points from the detailed Conservation Action Plans.

1.2 Goal

The overall goal of the Conservation Action Plans is:

"To ensure the recovery and long-term survival of the Wandering, Black-browed and Grey-headed Albatross at South Georgia by understanding the nature and extent of the threats they face and to reduce or eliminate these threats by implementing or promoting the required conservation research and management actions."

1.3 Aims

The aims of the Conservation Action Plans are that by 2020:

- Wandering Albatross population at South Georgia will have started to increase;
- Declines in the populations of the Black-browed and Grey-headed Albatross will have ceased.

1.4 Scope

The scope of the Conservation Action Plans is focused on the populations that breed at South Georgia. Given the significance of these populations, it is hoped that the implementation of these plans will positively influence the overall conservation status of the species. In order to effectively implement these plans, a collaborative effort, involving many stakeholders is required. The Conservation Action Plans include measures that are the direct responsibility of GSGSSI, but importantly also include 'external' actions that involve other nations, organisations and individuals. In these latter cases, collaboration and diplomatic engagement to promote and support management of these 'external' threats to South Georgia albatrosses is vital.

2. Threats

There is no evidence for any land-based threats or disease affecting South Georgia albatrosses. Incidental mortality of seabirds in fisheries (hereafter 'bycatch') is generally considered to be the greatest threat to most albatross species. Bycatch of seabirds has been reduced to negligible levels within the maritime zone of South Georgia & the South Sandwich Islands (SGSSI), which was formally declared a Marine Protected Area (MPA) in 2012, and in fisheries operating in waters managed by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). The residual threat to the Wandering, Black-browed and Grey-headed albatrosses from South Georgia is attributed to bycatch associated with fisheries operating outside of these areas.

Although there has been a general improvement in the collection and availability of seabird bycatch data over the last decade, the volume and reliability of bycatch information, is still severely limited for many areas and fisheries. However, a number of studies have been published recently that provide useful insights into the vulnerability of South Georgia albatrosses to fishing mortality, using tracking data to assess overlap of seabirds with fishing effort. Although overlap of birds with fishing effort does not necessarily equate to actual interactions with fishing gear and subsequent mortality, a recent study has shown a positive correlation between numbers of ringed Wandering Albatross from South Georgia recovered dead from longline vessels and their overlap index. The overlap index is therefore considered a reasonable proxy of bycatch risk. The maps in Figures 7-12 make use of tracking data collected by BAS at Bird Island to illustrate the distribution of Wandering, Black-browed and Grey-headed albatrosses from South Georgia, and how they overlap with Regional Fisheries Management Organisations (RFMOs) and areas of national jurisdiction. Although these provide a broad indication of areas of potential risk, there is a need to develop the overlap analyses further to identify more accurately the highest risk fleets, areas and seasons.

2.1 Wandering Albatross

When breeding, the Wandering Albatross from South Georgia ranges widely in the southwest Atlantic, mostly in pelagic waters (Fig. 7). Here their range overlaps with a number of fishing fleets. On the basis of studies conducted to date, during the breeding season the pelagic longline fleets from Japan and Taiwan are considered to be particularly important, and in terms of fishing effort are the largest fleets in the Atlantic.



Figure 7: Density distribution of the Wandering Albatross from Bird Island, South Georgia, during the breeding season in relation to the main RFMOs and other fisheries management areas with which they overlap. The blue dotted lines outline areas of national jurisdiction. The 30% contour indicates areas of highest concentration, within which breeding birds spend 30% of their time. The 90% contour encompasses 90% of their breeding distribution. Bird distribution data are from, and map compiled by, British Antarctic Survey.

Tracking data from the non-breeding period, which are more limited than for the breeding period, and ring recoveries, show an initial dispersal of non-breeding birds across the South Atlantic Ocean to areas off South Africa on the coastal shelf, shelf-slope and adjacent oceanic waters, followed by migration across the Indian Ocean to south-eastern Australian waters (Fig. 8). Overall, given their limited overlap with trawl fisheries, bycatch in longline fisheries is considered to be one of the main drivers of the decline in the Wandering Albatross from South Georgia. Fisheries managed by ICCAT, the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) and the Indian Ocean Tuna Commission (IOTC) are likely to present the greatest risk to the Wandering Albatross on South Georgia.



Figure 8: Density distribution of the Wandering Albatross from Bird Island, South Georgia, during the non-breeding period in relation to the main RFMOs and other fisheries management areas with which they overlap. See legend in Fig. 7 for description of density contours and symbols. Bird distribution data are from, and map compiled by, British Antarctic Survey.

2.2. Black-browed Albatross

The Black-browed Albatross has been recorded as bycatch, and is often the species caught in greatest numbers, in a range of southern hemisphere longline and trawl fisheries. While breeding, the Black-browed Albatross from South Georgia remains largely within the SGSSI MPA and the waters managed CCAMLR (Fig. 9), where seabird bycatch has been reduced to negligible levels.



Figure 9: Density distribution of the Black-browed Albatross from Bird Island, South Georgia, during the breeding season in relation to the main RFMOs and other fisheries management areas with which they overlap. See legend in Fig. 7 for description of density contours and symbols. Bird distribution data are from, and map compiled by, British Antarctic Survey.

In contrast, most (>90%) of the South Georgia population spend the nonbreeding period in the Benguela upwelling region off south-western Africa (Fig. 10) where they overlap with and have been recorded as bycatch from both longline and trawl fleets. Following the introduction of mitigation measures in 2006, significant reductions in seabird bycatch, including of Black-browed albatrosses, have been recorded for some of the fisheries operating in the South African Exclusive Economic Zone, and progress is being made towards seabird bycatch reduction in Namibia, led by the BirdLife Albatross Task Force. Whether this will lead to a change in the trend of the South Georgia population in the future remains to be seen. Fisheries managed by ICCAT and CCSBT are also considered to be important.



Figure 10: Density distribution of Black-browed Albatrosses from Bird Island, South Georgia during the non-breeding period in relation to the main RFMOs and other fisheries management areas with which they overlap. See legend in Fig. 7 for description of density contours and symbols. Bird distribution data are from, and map compiled by, British Antarctic Survey.

2.3. Grey-headed Albatross

During the breeding season, breeding adults forage largely around and to the south of the Antarctic Polar Front (Fig. 11).



Figure 11: Density distribution of the Grey-headed Albatross from Bird Island, South Georgia, during the breeding season in relation to the main RFMOs and other fisheries management areas with which they overlap. See legend in Fig. 7 for description of density contours and symbols. Bird distribution data are from, and map compiled by, British Antarctic Survey.

As with the Black-browed Albatross, the vulnerability of the South Georgia population of the Grey-headed Albatross to bycatch is greatest during the nonbreeding period, when they disperse widely across the Southern Ocean (Fig. 12). Their circumpolar distribution and propensity to forage at oceanic frontal zones brings the Grey-headed Albatross into potential conflict with a wide range of pelagic longline fisheries, including those targeting tuna and similar species in international waters. As for other species, fewer data are available for understanding the non-breeding distribution of Grey-headed Albatross, particularly the distribution of juvenile birds. Fisheries managed by ICCAT, CCSBT and IOTC likely represent the main bycatch-related risk to South Georgia Grey-headed albatrosses, especially during the non-breeding period. The Grey-headed Albatross is not commonly reported as bycatch in longline or trawl fisheries. However, recent reports have indicated that large numbers of Grey-headed albatrosses were incidentally caught by the Japanese pelagic longline fleet between 1992 and 2010 in the south-east Atlantic and south-west Indian Ocean, and between 2010 and 2015 in the central south-east Atlantic. The distribution of these bycatch records correspond closely with the distribution of recoveries of Grey-headed albatrosses that were ringed at South Georgia. Although recent reports of Grey-headed Albatross bycatch from other pelagic longline fisheries are lacking, this may well be due to low levels of observer coverage and reporting, rather than reflecting the actual levels of bycatch.



Figure 12: Density distribution of the Grey-headed Albatross from Bird Island, South Georgia, during the non-breeding period in relation to the main RFMOs and other fisheries management areas with which they overlap. See legend in Fig. 7 for description of density contours and symbols. Bird distribution data are from, and map compiled by, British Antarctic Survey.

3. Framework for Action

There are a number of important conservation and management actions already in place, and these should continue. However, in order to improve the conservation status of the Wandering, Black-browed and Grey-headed albatrosses from South Georgia, it is essential to identify and implement additional actions that will create a positive step-change in their fortunes. On the basis of the threats identified, the most important step-change actions are those that help enhance our understanding of the specific fleets that overlap with Wandering, Black-browed and Grey-headed albatrosses from South Georgia, as well as the areas and seasons of highest bycatch risk. This improved understanding is necessary to help inform a more focussed approach to engaging with these fleets to better understand and address bycatch impacts, through ACAP and through engagement with relevant fleets. Actions which meet these criteria have been identified as **Priority Actions**, and have been treated separately from the remaining actions, which are called **Associated Activities**. Both categories of actions are included in this Summary Plan.

These actions and activities are divided into eight work areas, or components of the plans, that are outlined below, in no order of importance:

- 1. Long-term monitoring of population dynamics.
- 2. Long-term monitoring of foraging ecology and diet.
- 3. Monitoring and management of potential land-based threats.
- Understanding marine-based threats to South Georgia albatrosses and implementing and promoting best practice management approaches within and outside SGSSI waters to address these.
- 5. Understanding the potential impacts of climate change on the ecology and population dynamics of South Georgia albatrosses.

- 6. Raising awareness of the plight of albatrosses at South Georgia, and the actions that are required and being undertaken to improve their conservation status.
- 7. Participating in international conservation and fisheries fora to promote actions that will help support the conservation of South Georgia albatrosses.
- 8. Reviewing the Conservation Action Plans to evaluate accomplishments and update information on priority needs.

3.1 Priority Actions

Given that bycatch in commercial fisheries is considered to be the main threat affecting Wandering, Black-browed and Grey-headed albatrosses from South Georgia, five Priority Actions have been identified, which all relate to understanding and addressing marine-based threats (Component 4). These are:

- Conduct detailed analyses of the overlap of Wandering, Black-browed and Greyheaded albatrosses from South Georgia with fisheries to identify the highest risk fleets, areas and seasons.
- Report and disseminate results of any overlap analyses to ACAP, BirdLife International and relevant Regional Fisheries Management Organisations (RFMOs) so that they can be used to conduct or update seabird-fisheries risk assessments, and help inform targeted engagement with fleets that overlap with South Georgia albatrosses.
- Develop and implement collaborative strategies for mitigating fisheries bycatch, including via the provision of data, updates and outreach materials arising from activities in the Conservation Action Plans.
- Strengthen the application of seabird bycatch mitigation measures within RFMOs and encourage better monitoring of compliance and effectiveness.
- Engage with those fleets that overlap most with South Georgia albatrosses to improve their use of bycatch mitigation.

4. Implementation

The first phase of implementation for these Conservation Action Plans is 2016-2020, which has been set to coincide with the time frame for the Biodiversity Action Plan for South Georgia & the South Sandwich Islands and the overarching South Georgia & the South Sandwich Islands Strategy. However, given the long-term nature of the overall goal, it is anticipated that the Conservation Action Plan will need to be extended beyond this initial five-year period.

In order to achieve the goal of this plan, and achieve and maintain a favourable conservation status for South Georgia albatrosses, effective collaboration is needed between a large number of organisations. Ongoing communication, commitment to the overall aims and recognition of the opportunities presented by emerging data and technologies is key.

Detailed information regarding the implementation of conservation actions is included in each of the species-specific Conservation Action Plans.

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