Agreement on the Conservation of Albatrosses and Petrels

First Meeting of the Population and Conservation Status Working Group

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The IUCN Red List assessments and Red List Index for species covered by the Agreement on the Conservation of Albatrosses and Petrels

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SUMMARY

In respect of developing indicators to measure the success of ACAP, the second Meeting of Parties (2006) agreed that relevant IUCN Red List Indices would be used as an interim indicator. At the sixth meeting of the ACAP Advisory Committee (2011) BirdLife International was requested to continue to provide each ACAP Meeting of Parties with the latest version of this indicator. This paper responds to this request.

Discussion topics are presented which invite feedback on potential Red List changes for six ACAP species.

RECOMMENDATIONS

PCSWG is encouraged to provide feedback on the discussion forum topics in this paper.

Evaluaciones de la Lista Roja y del Índice de la Lista Roja de la UICN para especies cubiertas por el Acuerdo sobre la Conservación de Albatros y Petreles

En referencia a los indicadores que se están desarrollando para medir el éxito del ACAP, la segunda Reunión de las Partes (2006) acordó que se usarían los Índices de la Lista Roja de la UICN como indicador preliminar. En la sexta reunión del Comité Asesor del ACAP (2011) se solicitó a BirdLife International que continuara proporcionando a cada Reunión de las Partes del ACAP la última versión de dicho indicador. El presente documento responde a dicha solicitud.

Se presentan los temas de discusión que invitan a que se realicen sugerencias para posibles cambios a la Lista Roja para seis especies del ACAP.

RECOMENDACIONES

Se alienta al GdTPEC a que realice comentarios sobre los temas de los foros de discusión en este documento.

Evaluations de la Liste rouge de l'UICN et Indice de la Liste rouge pour les espèces inscrites à l'Accord sur la conservation des albatros et des pétrels

S'agissant des indicateurs permettant de mesurer le succès de l'ACAP, la deuxième Réunion des Parties (2006) a convenu que certains Indices de la Liste rouge de l'UICN seraient utilisés comme indicateur provisoire. Lors de la sixième réunion du Comité consultatif de l'ACAP (2011), BirdLife International a été enjoint de présenter la dernière mouture de cet indicateur à chaque Réunion des Parties de l'ACAP. Le présent document répond à cette demande.

Des sujets de discussion sont proposés ; ils invitent à rendre un avis sur les potentielles modifications apportées à la Liste rouge pour les 6 espèces inscrites à l'ACAP.

RECOMMENDATIONS

Il est recommandé que le GTSPC rende un avis sur les sujets de discussion proposés dans ce document.

1. IUCN RED LIST INDEX

The IUCN Red List is widely recognised as the most authoritative and objective system for classifying species by their risk of extinction (see, e.g. de Grammont and Cuarón, 2006, Rodrigues *et al.* 2006). It uses quantitative criteria based on population size, rate of decline, and area of distribution to assign species to categories of relative extinction risk (IUCN 2001). The criteria are clear and comprehensive but are sufficiently flexible to deal with uncertainty (Akçakaya *et al.* 2000). The assessments are not simply based on expert opinion; they must be supported with detailed documentation of the best available data, with justifications, sources, and estimates of uncertainty and data quality (IUCN 2012). Red List Authorities (e.g. BirdLife International for birds) are appointed to organise independent scientific review and to ensure consistent categorisation between species, groups, and assessments. A Red List Standards and Petitions Subcommittee monitors the process and resolves challenges and disputes to listings. A coordinated global program is overseen by partner organisations including the IUCN Species Survival Commission, BirdLife International, NatureServe, Conservation International and a number of other non-governmental organisations and academic institutions.

The Red List Index (RLI) has been developed as an indicator of trends in the status of biodiversity. It illustrates the rate of biodiversity loss in terms of the rate that species are slipping towards (or away from) extinction. The index is based on the number of species in different categories of extinction risk on the IUCN Red List, and the movement of species between categories owing to genuine improvements or deteriorations in status (Butchart *et al.* 2004, 2005, 2007, 2010). The RLI integrates the net impacts of species improving in status and being downlisted to lower categories of threat (usually a consequence of conservation interventions) and those deteriorating in status and being uplisted to higher categories of threat (owing to declining populations and increasing threats).

The RLI for all birds was updated in 2012, and shows trends for the period since 1988, when birds were first assessed for the IUCN Red List. However, the assessments for albatrosses and petrels have not yet been completed because the process of compiling detailed data on populations and trends at each breeding colony (undertaken by the ACAP secretariat) and subsequent analysis in relation to the IUCN Red List criteria (undertaken by BirdLife International) has taken longer than anticipated. Preliminary evaluations have led to proposals to revise the categories of six species, and these are now open for wider review on the BirdLife International threatened bird discussion forums (http://www.birdlife.org/globally-threatened-bird-forums). Comments and input are welcomed.

2. RED LIST CATEGORY REVISIONS UNDER REVIEW

2.1. Black-footed Albatross: downlist from Vulnerable to Near Threatened?

Black-footed Albatross *Phoebastria nigripes* breeds on the Northwestern Hawaiian Islands (USA), the US Minor Outlying Islands and three outlying islands of Japan, colonies having been lost from other Pacific islands.

The species is currently listed as Vulnerable on the basis of suspected rapid ongoing population declines over three generations (A4bd). It was previously listed as Endangered but was downlisted in 2011 (see archived BirdLife discussion forum). However, further analysis of population trend estimates for the species suggests that further reassessment as Near Threatened may be warranted.

The analysis presented by Arata *et al.* (2009) concluded that the population is stable or increasing, although it may be at risk of decline in the future due to fisheries bycatch, with current bycatch levels approaching levels of Potential Biological Removal (PBR), the estimated maximum level of off-take possible without causing a decline. Other studies on this species have confirmed the impact of fisheries bycatch on survival (Verán *et al.* 2007) and the annual population growth rate (Niel and Lebreton 2005). Annual bycatch was estimated at 5,228 birds in 2005, which, if doubled to account for underestimation, approaches the maximum PBR level of 11,980 birds (Arata *et al.* 2009). The maximum PBR level for this species has previously been estimated at 8,850 birds per year (Niel and Lebreton 2005) and 10,000 birds per year (Cousins and Cooper 2000).

There is also uncertainty over the historic population trends of this species. Monitoring data from three colonies in Hawaii, representing over 75% of the world's population, suggested that numbers may have decreased by 9.6% from 1992 to 2001 (USFWS data per E. Flint 2003, Gilman and Freifeld 2003). However, linear regression analysis of log-transformed counts at the same colonies suggests that the species' population has remained stable since at least 1957 and has increased overall since 1923 (Arata *et al.* 2009), while matrix modelling suggests that its population is currently stable or increasing slightly (Arata *et al.* 2009). In addition, trends over a three generation period (56 years) commencing in 1956 were estimated at +26% using TRIM to analyse data from ACAP (W. Misiak *in litt.* 2012).

The lack of evidence for a population decline exceeding 30% over a three-generation period suggests that the species does not qualify as Vulnerable under A4, with a stable or increasing population suggesting it does not qualify under this criterion at Near threatened either. However, the risk of bycatch approaching PBR and potentially leading to declines in future suggests that a precautionary listing of Near Threatened (under criterion A3d; ie a projected decline approaching 30% over the next 56 years) may be more appropriate. Presumably the species would also not have qualified at any higher category level since the date it was first assessed for the IUCN Red List in 1988. Comments on this assessment and the proposed downlisting to Near Threatened, plus any additional information on population trends, are welcomed.

2.2. Amsterdam Albatross: downlist from Critically Endangered to Endangered?

Since 1994, Amsterdam Albatross *Diomedea amsterdamensis* has been listed as Critically Endangered under criteria (B2ab(v); C2a(ii)), since it was estimated to have an extremely small population, with breeding confined to a tiny area on one island, and continuing declines projected owing to diseases causing chick mortality.

However, the population has been steadily increasing since at least 1984, when the first census was carried out (Weimerskirch *et al.* 1997, Inchausti and Weimerskirch 2001, H. Weimerskirch *in litt.* 2005, 2010). There is now an estimated total population of c.170 birds including 80 mature individuals, with c.26 pairs breeding annually (Rains *et al.* 2011).

The population is nevertheless considered to be smaller than historic levels, when it is thought to have had a more extensive breeding range over the slopes of the island (Weimerskirch *et al.* 1997). In addition, Amsterdam Albatross is believed to have suffered severe declines in the 1970s (perhaps owing to degradation of breeding sites by introduced cattle, human , introduced predators, particularly feral cats, and possibly interactions with longline fisheries around the island (Inchausti and Weimerskirch 2001) and so, over three generations (c.82 years), has almost certainly declined overall. The primary future threat is thought to be the potential spread of diseases (avian cholera and *Erysipelothrix rhusiopathidae*) that affect the Indian Yellow-nosed Albatross *Thalassarche carteri* population 3 km from the colony (Weimerskirch 2004), whilst the foraging range of the species overlaps with longline fishing operations targeting tropical tuna species, so bycatch may present a further threat (ACAP 2010a).

Nevertheless, given c.30 years of data showing a steady population increase (and no data from before this period), and the fact that projected continuing declines have not yet materialised, the species arguably does not qualify under criteria B2ab and C2a (both require a “continuing decline”).

However, Amsterdam Albatross would qualify as Endangered under criterion D (total population numbering fewer than 250 mature individuals) if the population has numbered >50 mature individuals for at least five years. This seems plausible, but it is important to establish whether the species numbered fewer than 50 mature individuals at any point since 1988 (when the species was first assessed for the IUCN Red List). If so, when it is likely to have exceeded this threshold? This information is required in order to incorporate into the Red List Index (for all birds, and for ACAP-listed species specifically).

Comments are invited on this proposal to downlist to Endangered, specifically whether a “continuing decline” should be projected on the basis of the risk of disease and/or bycatch, and whether the population has numbered fewer than 50 mature individuals at any point since 1988, and if so, when this threshold was exceeded.

2.3. Black-browed Albatross: downlist from Endangered to Near Threatened?

Black-browed Albatross *Thalassarche melanophrys* is currently listed as Endangered under criterion A4bd on the basis of a projected ongoing population decline of more than 50% over three generations (65 years).

Around 70% of the global population of Black-browed Albatross breeds in the Falkland Islands (Islas Malvinas)[1] in the South Atlantic. Earlier analyses reported that numbers here apparently increased substantially during the 1980s, but declined during 2000-2005 at 0.7% per annum (Huin and Reid 2007). Given the large population here, this decline was a major factor contributing to the overall projected global population decline. However, some colonies surveyed using aerial photography showed a contrasting population trend, with increases of 21-141% during 1986-2005 reported. In 2010, an archipelago-wide survey of Black-browed Albatross was conducted for the Falkland Islands (Islas Malvinas)[1] Both the aerial and ground-based surveys conducted in 2010 revealed an increase in the Black-browed Albatross population of at least 4% per annum between 2005 and 2010. This positive trend is supported by demographic data and an additional aerial photographic survey conducted later in the 2010 breeding season (Wolfaardt 2012). It was also concluded that the islands' Black-browed Albatross population is likely to have increased since the first archipelago-wide ground survey in 2000, and possibly even since the initial ground based surveys were conducted at Beauchêne and Steeple Jason islands (Isla Los Salvajes) in the 1980s. Current estimates for the annual breeding population range between 475,500 and 535,000 breeding pairs.

Population trends from Chile (15-20% of the global population) are largely unknown. On South Georgia (Georgias del Sur)[1], which holds c.13% of the global population, only a relatively crude assessment can be made of the overall population trend (using estimates from Poncet *et al.* 2006 and extrapolating annual declines of 4% since 2006 on Bird Island (Isla Pajaro)), but these suggest a substantial decrease.

Incorporating these new data, the global population of Black-browed Albatross appears no longer to be undergoing ongoing declines over three generations since 1980, since increases in the population at the Falkland Islands (Islas Malvinas)[1] outweigh declines elsewhere such as at South Georgia (Georgias del Sur)[1]. The trend over a three generation period (65 years) commencing in 1980 is a 246% increase (see attached spreadsheet). While this might appear to qualify the species for Least Concern, there remains a considerable degree of uncertainty over population trends for a significant part of the global population, and this figure is heavily influenced by the extrapolation over 65 years of data from a ten-year period. In addition, high levels of mortality of this species are reported from longline and trawl fisheries in the South Atlantic. For these reasons, precautionarily listing the species as Near Threatened (under criterion A4d), with declines suspected to approach 30% over three

[1] A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

generations, may be more appropriate until further data are forthcoming. Additional information on population trends and comments on the proposed downlisting are welcomed.

2.4. White-capped Albatross: uplist to Vulnerable?

White-capped Albatross *Thalassarche steadi* has been listed as Near Threatened (approaching the thresholds for Vulnerable under criterion A2de, A3de, A4de) since 2007, when Diomedea cauta was split into *Thalassarche steadi* and *T. cauta*. The population trend of this species is poorly known. It is categorised as Near Threatened because, given its longevity and slow productivity, and a high rate of mortality recorded in longline and trawl fisheries, it is suspected to be declining at a moderately rapid rate (approaching 30% over 69 years). In part this reflects the fact that the species is characterised by high interannual variation in pairs breeding at colonies and may be a biennial breeder.

Restricted to New Zealand as a breeder, the vast majority of birds nest on Disappointment Island (91,500 pairs in 2008, ACAP 2011), with c.5,200 pairs on Auckland Island, and an additional 100 or so pairs at Adams Island, all in the Auckland Islands group; and 20 pairs on Bollon's Island in the Antipodes Island group.

The geographic range of *T. steadi* brings it into contact with a variety of longline and trawl fisheries in New Zealand, the high seas and off the coast of South Africa and Namibia (Baker *et al.* 2007). It has been estimated that the annual mortality of White-capped Albatrosses was over 8,000 over the period 1998-2005, 75% of which was as a result of interactions with trawl fisheries in South African, Namibian and New Zealand waters (Baker *et al.* 2007). The Auckland Islands squid trawl fishery killed 2,300 adults in 1990 alone, most through collision with net monitor cables, which were phased out in 1992 (Croxall and Gales 1998, Taylor 2000). However, birds are still killed by entanglement in nets and by collision with warp cables in trawl fisheries (Taylor 2000, Baker *et al.* 2007). This species is also the most frequently caught species in pelagic tuna longline operations off South Africa, with an estimated 7,000-11,000 killed between 1998-2000 (Ryan *et al.* 2002). In the South African demersal trawl fishery, observer data from 2004-2005 produced an estimate of 7,700 shy type albatrosses killed annually. Subsequent DNA analysis indicated that these were all *T. steadi* (ACAP 2011). In 2005 and 2006, *T. steadi* spent 85% of their time in southern African trawl grounds (ACAP 2011). Since the introduction of mandatory permit requirements in August 2006, whereby all vessels must deploy a bird streamer line, the bycatch rate has decreased, but further data collection is required to establish a new catch estimate (Watkins *et al.* 2006). The impact of the large distant water fleets of Japan, Taiwan and Korea on T*. steadi* is largely unknown, but Japanese data from 2001-2002 indicate that at least 10% of recorded albatross mortalities were 'shy-type' albatrosses (Baker *et al.* 2007). Commercial exploitation of squid or fish reserves in Bass Strait could pose a threat to the species in the future by direct competition for food. On Auckland Island, the nesting area was significantly reduced during 1972-1982 because of interference by pigs, and feral cats may also take small numbers of chicks (Croxall and Gales 1998, Taylor 2000, Thompson and Sagar 2006).

Population estimates prior to 2006 are not based on comparable methodologies, making it impossible to calculate population trends prior to that time. Since 2006, consistent survey methods have allowed greater comparability, with breeding numbers on Disappointment and Auckland Island estimated by aerial photography. Combined estimates for both islands (W. Misiak *in litt.* 2012) are:

2006/2007 = 117,197 pairs

2007/2008 = 90,866 pairs

2008/2009 = 96,958 pairs

2009/2010 = 74,730 pairs

2010/2011 = 77,005 pairs

A TRIM model fitted to these data suggests a population decline of 9.8% per year (W. Misiak *in litt.* 2012). This five year period is too short to extrapolate to a reliable population trend estimate over three generations (69 years). However, even if the actual decline rate was as low as 2.5% per year, then the species would qualify as Critically Endangered under criterion A4ade (extremely rapid population decline), providing the declines were projected to continue. If the decline was 1% per year or more then the species would qualify as Endangered, and a decline of 0.5% per year or more would qualify the species as Vulnerable.

The uncertainty over the validity of extrapolating data from a five year period over 69 years, coupled with further uncertainty caused by high interannual variation in breeding numbers, suggests that a precautionary estimate of a rapid ongoing population decline (30-49 % over 69 years) may be more appropriate until a longer period of counts are available to enable better projection of long term trends. Since the primary driver of declines is assumed to be fisheries bycatch, and given the reported bycatch figures, declines may be suspected to have been taking place for some time prior to the current series of counts. Thus, a decline of 30-49% over a 69 year period commencing in 1980, and uplisting to Vulnerable, is precautionarily proposed. If so, it would be important to pinpoint when the rate of population decline is thought likely to have first exceeded 30% over three generations (was this prior to, or since 1988?).

Comments are invited on whether uplisting to Vulnerable is appropriate given the data available and the likely threats to the species.

2.5. Grey-headed Albatross: uplist from Vulnerable to Endangered?

Grey-headed Albatross *Thalassarche chrysostoma* is currently listed as Vulnerable under criterion A4bd on the basis of an estimated population decline of 30-49% over three generations (90 years). This estimate is based on documented declines to date suggesting that the population has decreased by 15% since the mid-1980s, which, if continued, would equate 49% over three generations. However, given the uncertainty around these estimates, particularly the likely future trends, and the long trend period, a decline of 30-49% over 90 years was provisionally estimated.

Approximately half the global population of Grey-headed Albatross breeds on South Georgia (Georgias del Sur)[1], with a further c.18% breeding in Chile, c.15% on the French islands of Iles Kerguelen and Iles Crozet in the southern Indian Ocean, 8% on Campbell Islands, and 10% in the Prince Edward Islands (ACAP 2010b).

At South Georgia (Georgias del Sur)[1], the population is estimated to have declined by 25% between 1977 and 2004 (R. Phillips verbally 2012), which equates to a projected decline of 85% if declines continued at this rate over three generations. On Campbell Island, data from 2004 suggest that the population declined by over 75% between 1940 - 2004 (Moore 2004; Nel *et al.* 2002), which would equate to a 95% decline over three generations.

Population trends are unknown for Chile, Iles Kerguelen and Iles Crozet (representing around one third of the global population). Also, in contrast to South Georgia (Georgias del Sur)[1] and Campbell Island, the population on Marion Island has reported a 1.2% annual population increase from 1988-2011 (ACAP 2012), which would equate to a doubling of the population over three generations.

Combining these data (see attached spreadsheet), even if the Chilean, Iles Kerguelen and Iles Crozet colonies are assumed to be stable, the data from South Georgia (Georgias del Sur)[1] and Campbell Island result in a projected global population decline of 62.6% over three generations. This suggests that, despite the variability in data quality and considerable uncertainty over trends for this biennial breeder, the species could qualify as Endangered under criterion A4bd.

Discussion is welcomed on whether, given reanalysis of the best available data, it is appropriate to estimate an ongoing population decline of 50-79% over three generations (90 years), which would result in the species being uplisted to Endangered. If so, it would be important to pinpoint when the rate of population decline is thought likely to have first exceeded 50% over three generations (was this prior to, or since 1988?). In addition, any count data from colonies lacking more recent information is sought to enable more accurate assessment of trends.

2.6. White-chinned Petrel: uplist from Vulnerable to Endangered?

White-chinned Petrel *Procellaria aequinoctialis* is currently classified as Vulnerable under criterion A4bcde, as it is suspected to be undergoing a decline of 30-49% over three generations (74 years).

South Georgia (Georgias del Sur)**[1]** holds an estimated 773,000 pairs (ACAP 2009), 64% of the global population of 1,200,000 pairs. Kerguelen Islands (French Southern Territories) held a further 186,000-297,000 pairs in 2005 (Barbraud *et al.* 2009), or 16-25% of the global total. The Auckland Islands (New Zealand) hold the next largest population, 100,000 pairs in 1988 (ACAP 2009).

Globally, population data and trends are still lacking or are uncertain for a number of colonies. However, burrow occupancy declined by 28% on Bird Island, South Georgia (Isla Pajaro, Georgias del Sur)**[1]** during 1981–1998 (Berrow *et al.* 2000). Declines of 86% were recorded at sea in Prydz Bay, Antarctica between 1981-1993 (Woehler 1996). Population monitoring at a study plot on Marion Island recorded a 34% decrease in the population between 1997 and 2000 (Nel *et al.* 2002). Data from the Crozet archipelago indicate a 37% decline in breeding pairs between 1983 and 2004, based on population models and field estimates from two surveys (Barbraud *et al. in litt.* 2008). Data from at-sea surveys suggest a 35% decline in the Southern Indian Ocean during 1981-2007 (Péron *et al.* 2010a). On Iles Kerguelen, available population count data do not show any trend: 100,000-300,000 pairs in 1987 (Weimerskirch *et al.*, 1989) compared with 186,000-297,000 in 2005 (Barbraud *et al.*

2009), however Barbraud et al (2009) concluded that the population may be in decline, based on data from fisheries and a population model.

No population trend estimates are available from the Auckland, Campbell, Antipodes or Prince Edward Islands, together representing approximately 17% of the global population.

However, even if colonies on Auckland, Campbell, Antipodes, Prince Edward and Kerguelen are assumed to be stable, based on an ongoing -1.6% decline per year on South Georgia (Georgias del Sur)[1] (ACAP 2012) and declines in the smaller population on Crozet, the overall global population is projected to decline by 52% over three generations from 1980 (see attached spreadsheet). Martin *et al.* (2009) estimate a higher decline rate for South Georgia (Georgias del Sur)[1] (-1.9% per annum), and if the population on Kerguelen was suspected to be declining then the rate of overall population decline could be higher. This suggests that despite considerable uncertainty over the trend data, an uplisting from Vulnerable to Endangered may be warranted. Comments are invited on the population and trend estimates for this species and their implications for its potential uplisting, as well as the likely timing of when the trend may have exceeded 50% over three generations.

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