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“Beyond 2020: Shaping flyway conservation for the future”

ADVICE ON AEWA PRIORITIES FOR SEABIRD CONSERVATION

Introduction

Initial steps to address the challenges facing AEWA-listed seabirds included the presentation of two reviews to the 6th Session of the Meeting of the Parties (MOP6) to AEWA in 2015, which provided an overview of ongoing threats: the Review of the Status, Threats and Conservation Action Priorities for the Seabird Populations Covered by the Agreement (AEWA/MOP6.40, Tarzia et al. 2015) as well as the Review of potential impacts of marine fisheries on migratory seabirds within the Afro-Tropical Region (AEWA/MOP6.39, Hagen and Wanless 2014).

On the basis of the conclusions and recommendations presented in the two reviews mentioned above, MOP6 requested the AEWA Technical Committee to provide advice to the MOP on the most urgent seabird conservation priorities in the context of the implementation of the Agreement (Resolution 6.9 *Improving the Conservation Status of African-Eurasian Seabirds*).

A first outline of the paper was discussed at the 14th Meeting of the Technical Committee in April 2018 and the final draft was approved for submission to the 7th Session of the Meeting of the AEWA Parties by the Technical Committee and subsequently by the Standing Committee via correspondence.

Action requested from the Meeting of the Parties

The Meeting of the Parties is invited to note this prioritization paper and take its conclusions and recommendations into account in the decision-making process (draft Resolution AEWA/MOP7 DR6 *Priorities for the Conservation of Seabirds in the African-Eurasian Flyways*).

ADVICE ON AEWA PRIORITIES FOR SEABIRD CONSERVATION

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1. Introduction

Globally, seabirds are one of the most threatened groups of birds in the world and of the 84 species covered by the Agreement, sixteen are on the IUCN Red List, listed as either Vulnerable or Endangered, and a further eleven are ‘Near Threatened’; and the global population of 39 species is in decline.

The issues facing seabirds vary throughout the various regions in the AEWA range, as do the number of actors and stakeholders engaged in seabird conservation as well as our understanding regarding the pressures facing seabirds and the impacts these pressures are having on local, population or species level. In addition to International Single and Multi-species Action Plans developed for some of the most threatened seabirds covered by the Agreement - which require urgent implementation - there are wider-ranging thematic issues affecting seabirds which warrant action under AEWA on a broader scale, thereby supporting the implementation of the new AEWA Strategic Plan (2019-2027).

Initial steps to address the challenges facing AEWA-listed seabirds include the presentation of two reviews to the 6th Session of the Meeting of the AEWA Parties in 2015, which provided an overview of ongoing threats; the Review of the Status, Threats and Conservation Action Priorities for the Seabird Populations Covered by the Agreement ([AEWA/MOP6.40](#), Tarzia *et al.* 2015) as well as the Review of potential impacts of marine fisheries on migratory seabirds within the Afro-Tropical Region ([AEWA/MOP6.39](#), Hagen and Wanless 2014). In addition, MOP6 adopted the first AEWA International Species Action Plans focused on seabirds; the [International Multi-species Action Plan for the Conservation of Benguela Upwelling System Coastal Seabirds](#) (Hagen and Wanless, 2015) and the [International Single Species Action Plan for the Conservation of the Long-tailed Duck \(*Clangula hyemalis*\)](#) (Hearn *et al.* 2015).

On the basis of the conclusions and recommendations presented in the two reviews mentioned above, MOP6 requested the AEWA Technical Committee to provide advice to the MOP on the most urgent seabird conservation priorities in the context of the implementation of the Agreement (Resolution 6.9 “*Improving the Conservation Status of African-Eurasian Seabirds*”).

As such, this document summarises the eight main threats and themes facing AEWA-listed seabirds which emerge from the reviews mentioned above and proposes priority action to be implemented under the Agreement, based on the wide range of conservation priorities identified therein. This initial prioritisation of the most urgent conservation priorities for AEWA seabirds is based on:

- Species status and population trend (Global & regional IUCN Red Lists, [CSR7](#));
- Actions that will address multiple priorities/species;
- Actions where AEWA can add value, avoiding duplication with other existing efforts/frameworks;
- Actions which will support the implementation of the draft AEWA Strategic Plan 2019-2027, expected to be adopted at MOP7.

It should be noted that this broad-brush prioritisation is merely a first step in establishing AEWA’s niche and potential added value in terms of seabird conservation and that additional discussions will be necessary moving forward to further refine the priorities selected.

The Technical Committee will, in particular, need to review the suggested priorities in more detail during the coming triennium; to further develop the programmes and activities by which each body of work should be delivered and to further broaden the scope of AEWA’s work on seabirds, if necessary.

2. Summary of the status of AEWA seabirds

Seabirds are one of the most threatened groups of birds in the world (Croxall et al. 2012). On land, seabirds face threats including invasive alien species, habitat loss, hunting and disturbance; at sea they are impacted by bycatch in fisheries, overfishing, pollution and intensification of human use of the marine realm. Climate change can impact and exacerbate these threats in both spheres.

The African-Eurasian Migratory Waterbird Agreement (AEWA) identified the remaining gap in migratory seabird conservation within the region outside of the coverage provided by the Convention on Migratory Species (CMS) and the Agreement on the Conservation of Albatrosses and Petrels (ACAP), and the opportunity to bridge it, by including the migratory seabird species occurring within the AEWA area in its species list. Progressive discussions at a number of Meetings of the Parties (2nd, 3rd, 4th MOPs) led to the 2008 expansion of the list of species covered by the Agreement to include a total of 84 seabird species at MOP4 (Appendix I).

Of the 84 AEWA seabird species, 16 (19%) species are threatened with extinction (Vulnerable (VU) or Endangered (EN)) and 11 (13%) species are Near Threatened (NT) according to the global and regional IUCN Red List assessments (Annex 1). The Atlantic Puffin (*Fratercula arctica*), the Cape Cormorant (*Phalacrocorax capensis*), the Bank Cormorant (*Phalacrocorax neglectus*), the African Penguin (*Spheniscus demersus*) and the Cape Gannet (*Morus capensis*) are amongst the most threatened AEWA seabird species. Overall, 39 populations of AEWA-listed seabirds are in decline within the Agreement area (AEWA CSR7; Annex 1).

The comprehensive review by Tarzia *et al.* (2015) identified the following seven key threats to AEWA seabirds:

- (i) climate change;
- (ii) human impacts on prey (forage fish, ecosystem impacts);
- (iii) bycatch in fishing gear;
- (iv) human harvesting;
- (v) invasive species predation;
- (vi) mortality from oil spills and contaminants; and,
- (vii) disturbance and mortality from at-sea developments such as from offshore energy and mining.

Tarzia et al. also identified opportunities for protection afforded by identification and protection of priority at-sea sites as an additional theme of importance in relation to AEWA seabirds. These eight themes have been used as the basis for the structure of this document.

Major knowledge gaps were also identified as a major conservation challenge by Tarzia et al. and the most urgent knowledge gaps to be addressed as a priority under AEWA are highlighted in conjunction with the various thematic issues.

3. Advice on AEWA priorities for seabird conservation

3.1 Climate change

Climate change and its impact on marine ecosystems is recognised as a pervasive threat to seabird species (Croxall *et al.* 2012). Within the AEWA region, there have been shifts in plankton, fish and shellfish abundance in both northern and southern realms (Larsen *et al.* 2014). Within the North European Seas, Baltic and Southern Africa, depletion of prey is also a major threat for many seabird species and has been identified as the result of interacting threats from over-fishing, climate change and habitat degradation. Sea temperature rise and changes in oceanographic and biotic conditions impact seabirds through breeding and foraging range shifts; impacts on breeding success and adult survival, as well as timing of migration and dispersal (Oro 2014).

In the Baltic, massive declines of wintering seaducks have been observed (including Long-tailed Duck, Velvet Scoter, Steller's Eider). Reductions in bivalve prey have been implicated as a significant threat for such wintering seaducks and other benthic feeding seabirds (loons, grebes etc) (Skov *et al.* 2011), negatively affected by various factors including sea temperature rise.

In Southern Africa, of significant concern to the conservation of seabirds in the region is the collapse of the Namibian sardine fishery (Ludynia *et al.* 2010) and the eastward shift in distribution of sardine and anchovy stocks which are important seabird prey in South Africa (Coetzee *et al.* 2008). The status of three seabird species which depend primarily on small pelagic fish stocks (African Penguin, Cape Cormorant and Cape Gannet) have deteriorated. In addition, sea level rise and an increase in storminess and wave action has been identified as a threat which will affect those seabirds which breed on low-lying islands (African Penguin, Cape Gannet, and Cape, Bank and Crowned Cormorants).

In West Africa, sea-level rise and changes to ocean/coastal sea current patterns, and the erosion-deposition regimes, could cause significant loss of island habitats in coming years – especially the soft-sediment islands and breeding sites within the Banc d'Arguin, (Mauritania), Saloum Delta (Senegal) and Bijagos archipelago (Guinea Bissau). Other threats include loss of upwelling (particularly concerning for Senegal and Mauritania), and heat stress during breeding.

Although climate change is increasingly effecting seabird populations listed under AEWA and further exacerbating existing pressures, in this context of setting preliminary urgent priorities for seabird conservation under the Agreement and in light of the various ongoing climate change related research under other frameworks (for example within the Arctic and sub-Arctic region), **it is recommended to focus action under AEWA on measures related to the adaptation of climate change effects on AEWA-listed seabird populations.**

This can be achieved, for example, by developing and adopting International Single Species Action Plans or conservation advice for prioritized seabird species/populations through which specific issues such as the threats from sea-level and storminess rise can be addressed, as foreseen in the AEWA Strategic Plan (2019-2027) under Objective 1 (To strengthen species conservation and recovery and reduce causes of unnecessary mortality) in Targets 1.2 (All priority species/populations are covered by effectively implemented Species Action Plans at flyway level) and 1.3 (For all other populations in unfavourable conservation status, science-based conservation and management guidance is made available by AEWA and/or its Partners and is applied by Parties and other stakeholders).

Climate change adaptation measures can also be realised by continuing efforts to establish a comprehensive network of climate resilient critical sites for breeding and feeding as outlined in Objective 3 of the Strategic Plan (“Establishing and sustaining a coherent and comprehensive network of protected areas and other sites”).

3.2 Bycatch in fishing gear

In the Baltic, large numbers of seabirds are known to be killed in gillnet fisheries, with an estimate of 76,000 seabirds killed per year, among which cormorants, divers, seaducks, loons, grebes and alcids are identified as being particularly vulnerable impacts (Zydelis *et al.* 2009 & 2013). Urgent work is needed to test and improve solutions to seabird bycatch in gillnet fisheries.

In southern Africa, intensive commercial fisheries operate across the Benguela Current, including demersal and pelagic longlines, trawl and purse seines and some gillnetting (small scale/artisanal). However, in relation to susceptibility of AEWA listed seabirds to longline bycatch, only Cape Gannet is known to be killed in demersal and pelagic longlines (Watkins *et al.* 2008, Maree *et al.* 2014; Albatross Task Force, unpublished data), as well as trawls under certain conditions (B. Rose pers. comm. in Hagen & Wanless 2015). Cormorants are potentially at risk from gillnets (Zydelis *et al.* 2013), as is the African Penguin, but there are no data available.

Elsewhere, bycatch of seabirds is poorly known in most areas of the AEWA region, and bycatch data collection is a priority. Tarzia *et al.* (2015) highlighted particularly significant data gaps in the Arctic, Sub-Arctic, North Sea, Celtic Sea, Mediterranean, Black Sea, West African and East African regions, for all fishing gears. In West Africa, for example, pelagic and demersal longlines operate throughout the region including intensive longline industrial and commercial fisheries, as well as artisanal longline fisheries and also trawls, each presenting a bycatch threat to seabirds. Few bycatch data exist, but Northern Gannet is thought to be the species most likely to be at risk from longline fisheries, and Great Cormorant is thought the species most likely to be at risk from gillnet fishing in the region.

A breadth of recent or current work to address bycatch in AEWA seabirds already exists under various frameworks and in the form of several projects. There is, however, scope for AEWA to play a role in filling data gaps in terms of bycatch where such gaps persist in collaboration with other international organisations and, in particular, to feed bycatch data into an assessment of the cumulative impact of all forms of taking at flyway/regional scale on AEWA seabird populations to ensure sustainable use of seabirds.

PROPOSED PRIORITY ACTIONS:

- **Fill seabird bycatch data gaps throughout the AEWA range, through existing regional frameworks and projects**
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.4 “improve status assessments, including information on drivers”*
- **Assess the extent and impact of bycatch by artisanal fisheries to AEWA-listed seabirds, in regions where such fisheries exist** (as part of a wider assessment of the extent and potential impact of artisanal fisheries in relation to direct seabird harvest and impacts on prey)
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.4 “improve status assessments, including information on drivers”*
- **Feed bycatch data into a flyway assessment of the cumulative impact of seabird mortality (e.g. from harvesting, illegal killing and taking and bycatch) to inform national and regional decision-making on the sustainable use of seabirds**
 - *Delivering against AEWA Strategic Plan Objective 2: “use and management of migratory waterbirds is sustainable”; Target 2.1 “harvest levels are monitored to support sustainable harvest”*

3.3 Human impacts on prey (forage fish, ecosystem impacts)

Human-induced prey-depletion and/or over-fishing are recognized as a key threat to AEWA-listed seabirds throughout the Agreement Area – this is particularly the case in the Northern European Seas, West Africa, Southern African as well as East African regions, as outlined in both Tarzia et al. 2015 and Hagen and Wanless 2014. This includes direct competition for prey with fisheries (both commercial and artisanal/recreational) as well as indirect impacts linked to fishing activities such as displacement of seabirds and loss of commensal species which leads to lower food availability - particularly for tropical seabirds foraging in association with tunas and tuna-like fish (such as the Red-billed, White-tailed and Red-tailed Tropicbirds, the Masked Booby, Greater and Lesser Frigatebirds, Brown and Lesser Noddys as well as Bridled and Sooty Terns) as highlighted by Tarzia et al. 2015.

In several regions, such as East Africa, catch data indicates that fisheries there are consistently exceeding maximum sustainable catch levels (Le Corre et al. 2012). The impact of artisanal as well as recreational fishers, however, which target a wide variety of species, is poorly quantified and therefore largely unknown (Tarzia et al. 2015). In light of this, it is suggested that immediate action under the Agreement, as noted by Resolution 6.9, be focused on the assessment of the impact of artisanal and recreational fishers on prey as part of a wider assessment on the impact of artisanal fishers in terms of bycatch and direct seabird harvest.

Recommended priorities identified by Tarzia et al. 2015 included the management of forage fisheries to ensure a sustainable catch and sufficient prey for seabirds (particularly in East Africa). Given the limited resources currently available under the Agreement, an active engagement with Regional Fisheries Management Organisations (RFMOs) to influence the management of forage fisheries is unfeasible. As such, in terms of

tackling over-fishing it is recommended to focus on building collective capacity together with other conservation frameworks to ensure representation of AEWA seabird priorities within the relevant RFMOs. In addition, AEWA is also well-placed to conduct an assessment of the impact of artisanal fisheries on seabird prey, as part of a wider assessment on the impact of artisanal fisheries on seabirds.

PROPOSED PRIORITY ACTIONS:

- **Assess the impact of artisanal/recreational fisheries on prey** (as part of a wider assessment of the scope and potential impact of bycatch and direct seabird harvest by artisanal fishers)
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.4 “improve status assessments, including information on drivers”*
- **Ensure regular representation on selected priority Regional Fisheries Management Organisations (RFMOs) through a collaborative approach with other conservation frameworks**
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.6 “priorities related to unnecessary additional mortality are integrated in key multilateral processes”*

3.4 Hunting / egg harvesting

Within the Arctic and sub-Arctic region, legal hunting of adult seabirds occurs in Greenland, Iceland, Svalbard, Norway, Finland, Russia and the Faroe Islands (Merkel & Barry, 2008). Based on government records and best estimates in recent literature, it is estimated that the legal catch of seabirds ranges between 391,000 and 741,000 seabirds harvested across the Arctic and sub-Arctic AEWA region each year (Merkel 2010; Iceland Department of Fishing, Hunting & Agriculture, 2015). And additional illegal killing also occurs in some areas. A wide range of species is harvested, varying by country, but often including murre, eider species, Atlantic Puffin and gull species. CAFF’s Seabird ‘CBIRD’ working group coordinates the seabird monitoring programmes across the Arctic region, including the synthesis of harvest levels of seabirds (e.g. Merkel & Barry 2008, Arctic Biodiversity Trends 2010). In addition, The Circumpolar Flyway 2015-2019 workplan under CAFF’s Arctic Migratory Bird Initiative lists the mitigation of unsustainable harvest as a key priority.

Within the EU, there are 17 AEWA seabird species known to be legally hunted in the Temperate Northern Atlantic Seas Area, mostly in the Baltic Sea States and Northern European countries. Statistics on annual catch are poorly recorded across the region and this represents a major knowledge gap. Within the Baltic Seas region, the Regional Seas Convention HELCOM (Helsinki Convention) has established maximum bag limits for the annual legal harvest for 12 AEWA seabird species.

Unregulated harvesting of seabirds within West Africa was considered a moderate threat by Tarzia et al. 2015, but the prevalence, regularity and impacts of deliberate targeting of adult birds for human consumption remain unknown and is potentially the biggest threat to many of the region’s more coastal species listed by AEWA.

Tarzia et al. 2015 identified seabird and egg harvesting as relatively low level among AEWA species in West Africa and southern Africa, but in East Africa egg harvesting was identified as occurring across the region,

although with few data on harvest rates. Egg harvesting of Sooty Tern occurs in Madagascar to a high level (Le Corre and Bemanaja, 2009), although harvest of Lesser Crested Tern has been reduced to a great degree following improved protection. In islands off Saudi Arabia, the eggs of breeding gull and tern species such as Sooty Gull, White-eyed Gull, Caspian Tern, Lesser Crested Tern, Greater Crested Tern, White-cheeked Tern, Bridled Tern, and Saunder's Tern are regularly harvested (Shobrak and Aloufi, 2014). In Djibouti harvesting also occurs (Shobrak, 2007) of Common Noddy, Bridled Tern, and White-cheeked Tern.

To maximise conservation impact, improved AEWA national-level data would be a precursor to an AEWA regional and flyway analysis of legal and illegal harvest to allow an assessment of total harvest mortality relative to other causes, particularly mortality from bycatch in fisheries, in order to develop regional guidance on sustainable harvest levels based on combined mortality (bycatch + harvesting). Tarzia *et al.* 2015 recommended a role for AEWA in this regional assessment of cumulative (bycatch+ harvesting) impact at a flyway/regional scale.

In regions where other Multilateral Environmental Agreements (MEAs) are already active in relation to collation of hunting and harvesting data, AEWA could facilitate a joint analysis (for example linking with the collation of seabird harvest data that is undertaken by the CBIRD group for CAFF; or HELCOM). Such national- and regional-level work would also contribute to the avian work that is needed to respond to the Resolution from CMS on aquatic wild meat ([UNEP/CMS/Resolution 12.15, Aquatic Wild Meat](#)).

PROPOSED PRIORITY ACTIONS:

- **Gather data on seabird harvest (legal and illegal) of AEWA-listed species throughout the AEWA range**
 - *Delivering against AEWA Strategic Plan Objective 2: “use and management of migratory waterbirds is sustainable”; Target 2.1 “harvest levels are monitored to support sustainable harvest”*
- **Assess the extent and impact of direct seabird harvest of AEWA-listed species by artisanal fisheries** (as part of a wider assessment of the extent potential impact of artisanal fisheries in relation to bycatch and impacts on prey)
 - *Delivering against AEWA Strategic Plan Objective 2: “use and management of migratory waterbirds is sustainable”; Target 2.1 “harvest levels are monitored to support sustainable harvest”*
- **Carry out a flyway-level assessment of the cumulative impact of seabird mortality (e.g. from harvesting, illegal killing and taking and bycatch) to inform national and regional decision-making on the sustainable use of seabirds**
 - *Delivering against AEWA Strategic Plan Objective 2: “use and management of migratory waterbirds is sustainable”; Target 2.1 “harvest levels are monitored to support sustainable harvest”*

3.5 Invasive species predation

Invasive predators are one of the principal threats to seabirds globally and, while expertise in tackling this issue has historically resided in the Pacific, knowledge is also being amassed in the AEW region. In sub-Arctic regions, predation by introduced species such as the Black Rat and American Mink is a threat to seabird eggs and chicks (e.g. Norway, Finland, Iceland, northern UK) (Bonesi *et al.* 2007). In addition, it is thought possible that some introduced (and native) predators will be able to extend their range northwards under warmer climate conditions. Changes in ecosystem dynamics, such as the disruption of the lemming cycle can also lead to increased predation on AEW seabird species (e.g. Long-Tailed Duck and Common Eider, Hario *et al.* 2009, Bellebaum *et al.* 2012 in relation to predation by native species).

In the Northern European Seas region, the threat from introduced mammalian predators such as rats, feral cats, ferrets and American Mink and Raccoon Dog is known to be having a widespread impact across the region's seabirds (Bellebaum *et al.* 2012; Bodey *et al.* 2010; Jones *et al.* 2008). Seabird species particularly affected by Mink predation include: Black Guillemot, Arctic Tern, Common Tern, Black-headed Gull, Common Gull, Common Eider, Horned Grebe, Velvet Scoter, Red-breasted Merganser (in Bonesi & Palazon, 2007).

Within the Lusitanian region, the Threatened Island Biodiversity Review identified the Berlengas Islands on mainland Portugal, the Azores Islands and Madeira and Canary Islands as islands where seabirds are particularly threatened by predation from invasive or native predators (Spatz *et al.* 2014), although the impact on AEW seabird species is not well known in all cases.

In the Mediterranean, the majority of seabird breeding islands contain invasive predators, for example only two of 23 seabird breeding islands making up the Balearic Islands, are currently free of invasive predators (Spatz *et al.* 2014). The severity of impact from introduced predators on AEW listed seabird species is mostly unknown, but Audouin's Gull chicks are predated upon at a significant level by introduced predators such as rats and foxes, and dogs and cattle can also destroy nests and kill chicks (Gallo-Orsi, 2003). The Little Tern breeding in Greece is also predated upon by cats and foxes (Goutner 1990) and the Slender-billed Gull, Sandwich and Common Terns in the Ebro Delta are preyed upon by cats, rats and foxes (Oro 2009).

In West Africa, most of the vulnerable, AEW-listed seabirds from the islands of Cape Verde have largely disappeared from unprotected/inhabited islands; healthy populations remain only at uninhabited islands where access by people is difficult or controlled. Elsewhere in the region, most islands relatively close to the continent have long been colonised by people and/or commensal species. Within the Gulf of Guinea, the only significant, extant seabird colony is at the Tinhosas islands, off Principe (Valle *et al.* 2014). Currently these islands are free of invasive predators, but access to the islands is uncontrolled and frequent, which presents a significant risk of colonisation by stowaway rats or mice.

In East Africa, predators such as the Norwegian Rat and feral cats have been introduced on seabird islands across the region (e.g. Seychelles, Tromelin Island) and within important coastal breeding areas (e.g. Saudi Arabia). On Tromelin Island, invasion by rats is believed to have contributed to local extirpations of Greater Frigatebirds, Sooty Terns and Brown Noddies, among other seabird species (Le Corre *et al.* 2015). Eight years after rats were successfully eradicated on Tromelin Island a number of seabird species were returning, at least as non-breeders. Rats and cats are preying on eggs and chicks of Common Noddy, Bridled Tern and White-cheeked Tern in islands off Djibouti and are believed to be a severe threat to reproductive success (Shobrak, 2007). In southern Africa, predation by native species (Cape Fur Seals, Kelp Gulls and Great White Pelicans) is a considerable threat for several species in the region.

AEWA can play a key role in identifying the scale of the existing issue across AEWA seabird species throughout the flyway and stimulating prioritisation of eradication actions (e.g. Dawson et al. 2014).

PROPOSED PRIORITY ACTIONS:

- **Identify those seabird colonies where the threat from alien predators is significant and prioritize them for action**
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.4 “improve status assessments, including information on drivers” and Objective 3: “establish and maintain flyway network of protected areas and sites”; Targets 3.1 “identification of nationally or internationally important sites”, 3.2 “threats to identified sites are assessed” and 3.3 “sites actively protected and managed”*

- **Review and assess available alien predator control, removal and eradication measures and provide best practice guidance to Parties**
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.6 “priorities related to unnecessary additional mortality are integrated in key multilateral processes” and Objective 3: “establish and maintain flyway network of protected areas and sites”; Targets 3.1 “identification of nationally or internationally important sites”, 3.2 “threats to identified sites are assessed” and 3.3 “sites actively protected and managed”*

3.6 Mortality from oil spills and contaminants

Tarzia et al. 2015 assessed that most regions within AEWA are at risk from oil spills and chronic pollution as a result of heavy shipping traffic as well as sensitive species, with Arctic, Sub-Arctic, Baltic, Northern European Seas, Mediterranean, East Africa and South Africa particularly highlighted. Auks, diving ducks, loons, grebes, cormorant species, and the African Penguin are considered particularly vulnerable to oil spill events due to the extensive time spent on or under the ocean surface to feed. Hagen and Wanless 2015 also assessed oil spills as a high threat to AEWA seabirds in the Benguela Current region, with oil sources ranging from vessel discharges, to oil and gas, to fish oil from fish processing factories.

The reduction of summer sea ice and expansion of oil and gas exploration and drilling across the high Arctic has the potential to increase shipping traffic and therefore the potential for oil spill events (Fort *et al.* 2013; Clausen *et al.* 2012; National Research Council, 2014).

Accumulation of organic pollutants within the Arctic marine environment is well documented (Mallory *et al.* 2006), including in Arctic seabirds, particularly scavenging and predatory seabird species such as the Glaucous Gull, and Herring Gull. Research on dead and dying Glaucous Gulls in the Barents Sea indicated a negative correlation between contaminant loads and body condition, leading Sagerup *et al.* (2009) to conclude that contaminant levels contributed to the birds’ death. Within the Northern European Seas, many migratory seabird species show indications of high contaminant levels (e.g. Common Scoter, Common Eider, Common Murre, Arctic and Common Terns (Camphuysen *et al.* 2002; Michelutti *et al.* 2010, Siebert *et al.* 2012). The contaminant levels within eggs of Common Tern have been found to impair reproduction (Castillo 1994).

Contaminant levels in Common and Arctic Tern eggs are used as an indicator of contaminant levels in the North Sea as part of the Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR). The impact of contaminants on seabird survival requires further research, particularly in the context of multiple threats and stressors reducing resilience of bird populations.

Tarzia *et al.* 2015 recommended, amongst other actions, that AEWA develop a series of regional oil spill response plans specifically designed for seabird conservation, identifying the key coastal and at sea areas where response would be most urgently required. However, Tarzia *et al.* 2015 also noted that the Arctic Council, OSPAR, HELCOM, and Nairobi, Barcelona and Abijan Conventions all have oil spills and contaminants within their remits. The Arctic Council working group, Emergency Prevention, Preparedness and Response (EPPR), is actively engaged in guidelines for international cooperation in the event of an oil spill in the Arctic region. In addition, under CAFF's Actions for Arctic Biodiversity 2013-2021, there is an action to implement the agreement on cooperation on marine oil pollution preparedness and response in the Arctic, including executing international exercises and maintaining and updating operational guidelines. Further, The Nordic Council of Ministers funded the North Atlantic Sensitivity and Response Map, as a joint program by Greenland, Iceland, Faroe Islands and Norway. In addition, there are several international agreements which address oil spills: for instance, the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), International Convention for the Prevention of Pollution from Ships (MARPOL) and the Protocol to the London Dumping Convention.

PROPOSED PRIORITY ACTIONS:

- **Identify the key coastal and at-sea areas where responses to oil spills would be most urgently required within the AEWA region in relation to the presence of AEWA seabirds, including the identification of relevant frameworks tasked with oil spill response**
 - *Delivering against AEWA Strategic Plan Objective 3: “establish and sustain coherent and comprehensive network of protected areas and other sites”; Target 3.3 “sites actively protected and managed” and Objective 4: “ensure sufficient habitat in the wider environment”; Target 4.1 “priorities for habitat conservation and management in wider environment identified”*

- **Liase with identified relevant frameworks to ensure that AEWA seabirds and seabird sites are adequately represented within existing regional oil spill plans**
 - *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.6 “priorities related to unnecessary additional mortality are integrated in key multilateral processes” and Objective 4: “ensure sufficient habitat in the wider environment”; Target 4.4 “improved management or restoration of waterbird habitats through international multi-stakeholder partnerships”*

3.7 Disturbance and mortality from at-sea developments such as from offshore energy and mining

Offshore wind farms pose a threat to AEWA seabird species due to the risk of collision with rotor blades during flight, direct disturbance and habitat loss as well as displacement from migratory pathways and key habitat (Desholm & Kahlert, 2005). The Northern European Seas ecoregion contains large numbers of offshore wind

farms in comparison to the rest of the AEWA region, overlapping with high levels of seabirds and many marine Important Bird Areas.

As such, Tarzia *et al.* 2015 highlighted the need to understand interaction between seabirds and offshore wind turbines in the Northern European Seas Eco-Region in particular, including the need to validate existing theoretical models, and to understand the cumulative impact of wind farms across the North Sea region. In addition, Tarzia *et al.* 2015 highlighted that although the current number of offshore windfarms in the so-called Lusitanian region is relatively small, planning and construction is underway to build numerous windfarms along the coast (France, Spain, Portugal) – the potential cumulative impacts of which are unknown (Cruz & Simas 2012).

While there is a considerable body of research on the theoretical impact of offshore windfarms on seabird species dating from the early 2000s in the Netherlands, Germany and UK (e.g. Desholm & Kahlert, 2005; Garthe *et al.* 2004) there are few empirical studies and few assessments of population-level impacts (Norden 2010) and data gaps remain a key issue.

However, as the main developments with respect to offshore windfarms are currently concentrated within the North and Baltic Seas, where a substantial amount of work has already been carried out or is ongoing involving a number of international frameworks (OSPAR, HELCOM, Bern Convention, EU, CMS Energy Task Force), it is suggested that AEWA mainly continue to contribute to the issue by remaining engaged in the ongoing processes and limit priority action to data collection by AEWA Parties.

PROPOSED PRIORITY ACTIONS:

- **Address impacts of offshore wind farms on AEWA seabird species in the North Sea and Baltic Sea, by undertaking a program of data-collection by AEWA Parties to validate models of population level impacts and promotion of a pilot project on the North Sea and Baltic Sea within the CMS Energy Task Force**
 - o *Delivering against AEWA Strategic Plan Objective 1: “strengthen species conservation/recovery and reduce causes of unnecessary mortality”; Target 1.6 “priorities related to unnecessary additional mortality are integrated in key multilateral processes”*

3.8 Opportunities for protection afforded by identification and protection of priority sites

Despite ongoing action under various legal frameworks within the Agreement area, major gaps in marine IBAs and protected marine areas still exist. This is, for example, the case in the Arctic and sub-Arctic, where many AEWA-listed seabirds are recognized as globally threatened and/or have declining population trends (for example Common Murre, Atlantic Puffin, Thick-billed Murre, Razorbill, Velvet Scoter, Steller’s and King’s Eider as well as Yellow-billed, Arctic and Common Loon).

Within the Northern European seas, the marine IBA network is well established, particularly for seaduck species. However, coastal areas surrounding breeding colonies and breeding as well as wintering pelagic sites are still lacking for auk species. Coastal wintering sites for seaduck species still need further development in the North and Celtic Seas. Within East Africa, the main gaps in the IBA network include the identification of colonies, coastal extension areas and pelagic foraging sites as outlined by Tarzia *et al.* 2015 in further detail.

The new AEWA Strategic Plan (2019-2027) includes a strong focus both on the identification and protection of critical sites (Objective 3) as well as the availability of sufficient quantity and quality waterbird habitats in the wider environment (Objective 4). Considering the gaps in knowledge in relation to critical sites for AEWA-listed seabirds, there is scope for prioritising the identification and subsequent protection of critical sites for seabirds under the Agreement.

PROPOSED PRIORITY ACTIONS:

- **Fill gaps in the critical site network for seabirds (breeding, non-breeding, pelagic and coastal areas)**
 - o *Delivering against AEWA Strategic Plan Objective 3: “establish and sustain coherent and comprehensive network of protected areas and other sites”; Target 3.1 “priority site gaps are filled”*
- **Protect and manage identified critical sites**
 - o *Delivering against AEWA Strategic Plan Objective 3: “establish and sustain coherent and comprehensive network of protected areas and other sites”; Target 3.3 “sites actively protected and managed”*

4. Conclusions

Urgent conservation action is required for a number of AEWA-listed seabirds, which as a collective group of birds face a particular set of threats and conservation challenges to varying extents throughout the AEWA geographic range. Of the 84 seabird species listed under the Agreement, 16 species are recognized as Vulnerable (VU) or Endangered (EN) and 11 are Near Threatened (NT) according to the global and regional IUCN Red List assessments (Annex 1). Overall, 39 populations of AEWA-listed migratory seabirds are in decline within the Agreement area (AEWA CSR7; Annex 1).

Following this broad-brush prioritization exercise, which takes into account species status and population trend, actions that will address multiple priorities/species, actions where AEWA can add value, as well as the conservation and management priorities outlined in the AEWA Strategic Plan (2019-2027), it is proposed to focus initial AEWA seabird-related action on addressing the following conservation challenges:

BYCATCH IN FISHING GEAR:

- **Fill seabird bycatch data gaps throughout the AEWA range, through existing regional frameworks and projects;**
- **Assess the extent and impact of bycatch by artisanal fisheries to AEWA-listed seabirds, in regions where such fisheries exist** (as part of a wider assessment of the extent and potential impact of artisanal fisheries in relation to direct seabird harvest and impacts on prey);

- **Feed bycatch data into a flyway assessment of the cumulative impact of seabird mortality (e.g. from harvesting, illegal killing and taking and bycatch) to inform national and regional decision-making on the sustainable use of seabirds.**

HUMAN IMPACTS ON PREY (overfishing etc.):

- **Assessment of the impact of artisanal/recreational fisheries on prey (as part of a wider assessment of the scope and potential impact of bycatch and direct seabird harvest by artisanal fisheries);**
- **Ensure regular representation on selected priority Regional Fisheries Management Organisations (RFMOs) through a collaborative approach with other conservation frameworks.**

HUNTING / EGG HARVESTING:

- **Gather data on seabird harvest (both legal and illegal) of AEWA-listed species throughout the AEWA range;**
- **Assessment of the extent and impact of direct seabird harvest of AEWA-listed species by artisanal fisheries (as part of a wider assessment of the extent and potential impact of artisanal fisheries in relation to bycatch and impacts on prey);**
- **Carry out a flyway-level assessment of the cumulative impact of seabird mortality (e.g. from harvesting, illegal killing and taking and bycatch) to inform national and regional decision-making on the sustainable use of seabirds.**

INVASIVE SPECIES PREDATION:

- **Identify those seabird colonies where the threat from alien predators is significant and prioritize them for action.**

MORTALITY FROM OIL SPILLS AND CONTAMINANTS:

- **Identify the key coastal and at-sea areas where responses to oil spills would be most urgently required within the AEWA region in relation to the presence of AEWA seabirds, including the identification of relevant frameworks;**
- **Liaise with identified relevant frameworks to ensure that AEWA seabirds and seabird sites are adequately represented within existing regional oil spill plans.**

DISTURBANCE AND MORTALITY FROM AT-SEA DEVELOPMENTS SUCH AS FROM OFFSHORE ENERGY AND MINING:

- **Address impacts of offshore wind farms on AEWA seabird species in the North Sea and Baltic Sea, by undertaking a program of data-collection by AEWA Parties to validate**

models of population level impacts and promotion of a pilot project on the North Sea and Baltic Sea within the CMS Energy Task Force.

IDENTIFICATION AND PROTECTION OF PRIORITY SITES:

- **Filling gaps in the critical site network for seabirds (breeding, non-breeding, pelagic and coastal areas);**
- **Protection and management of identified critical sites.**

As highlighted in the introduction above, this prioritization exercise is a first step to initiate wider seabird work under the Agreement and further deliberations both within the framework of AEWA (led by the Technical Committee), as well as with other relevant international bodies and stakeholders, will be necessary to flesh these priorities out in detail in terms of programmes and activities needed to implement the foreseen bodies of work. Further deliberations may also examine the scope of seabird work under AEWA and consider whether it needs to be further focused or broadened, as necessary.

Tackling these wider conservation challenges facing seabirds is expected to not only benefit those AEWA-listed species/populations currently in decline, but also to contribute to the continued favourable conservation status of those species/populations which are currently considered to be stable or increasing. All identified priorities will also directly contribute to achieving a broad range of objectives and results outlined in the AEWA Strategic Plan (2019-2027).

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Annex I.

Full list of AEWA-listed seabird species, with the global and European Red List category provided, as well as population trend according to the 7th Edition of the Conservation Status Report (CSR7). Species highlighted in *yellow* are threatened according to the IUCN Red List Categories and those highlighted in *light blue* have populations that are (potentially) declining.

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
Alcidae						
1	<i>Alca torda</i>	Razorbill		NT		
			<i>torda</i> , E North America, Greenland, E to Baltic & White Seas			INC?
			<i>islandica</i> , Iceland, Faeroes, Britain, Ireland, Helgoland, NW France			DEC
2	<i>Alle alle</i>	Little Auk		LC	LC	
			<i>alle</i> , High Arctic, Baffin Is – Novaya Zemlya			Unknown
3	<i>Cephus grylle</i>	Black Guillemot		LC	LC	
			<i>grylle</i> , Baltic Sea			DEC
			<i>mandtii</i> , Arctic E North America to Greenland, Jan Mayen & Svalbard E through Siberia to Alaska			STA?
			<i>arcticus</i> , N America, S Greenland, Britain, Ireland, Scandinavia, White Sea			STA?
			<i>islandicus</i> , Iceland			DEC
			<i>faeroeensis</i> , Faeroes			Unknown
4	<i>Uria aalge</i>	Common Murre		LC	NT	
			<i>aalge</i> , Iceland, Faeroes, Scotland, S Norway, Baltic			DEC?

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
			<i>albionis</i> , Ireland, S Britain, France, Iberia, Helgoland			INC
			<i>hyperborea</i> , Svalbard, N Norway to Novaya Zemlya			INC?
5	<i>Uria lomvia</i>	Thick-billed Murre		LC	LC	
			<i>lomvia</i> , E North America, Greenland, E to Severnaya Zemlya			DEC
6	<i>Fratercula arctica</i>	Atlantic Puffin		VU	EN	
			Hudson Bay & Maine E to S Greenland, Iceland, Bear Is, Norway to S Novaya Zemlya			DEC?
			NE Canada, N Greenland, to Jan Mayen, Svalbard, N Novaya Zemlya			Unknown
			Faeroes, S Norway & Sweden, Britain, Ireland, NW France			DEC?
Anatidae						
7	<i>Bucephala clangula</i>	Common Goldeneye		LC	LC	
			<i>clangula</i> , North-west & Central Europe (win)			STA/DEC
			<i>clangula</i> , North-east Europe/Adriatic			STA/DEC?
			<i>clangula</i> , Western Siberia & North-east Europe/Black Sea			INC?
			<i>clangula</i> , Western Siberia/Caspian			UNC
8	<i>Clangula hyemalis</i>	Long-tailed Duck		VU	VU	
			Iceland & Greenland (bre)			Unknown
			Western Siberia/North Europe (bre)			DEC

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
9	<i>Melanitta fusca</i>	Velvet Scoter		VU	VU	
			Western Siberia & Northern Europe/NW Europe			DEC?
			Black Sea & Caspian			UNC
10	<i>Melanitta nigra</i>	Common Scoter		LC	LC	
			W Siberia & N Europe/W Europe & NW Africa			STA/INC?
11	<i>Mergus merganser</i>	Goosander		LC	LC	
			<i>merganser</i> , North-west & Central Europe (win)			STA/DEC?
			<i>merganser</i> , North-east Europe/Black Sea			INC/STA
			<i>merganser</i> , Western Siberia/Caspian			INC?
12	<i>Mergus serrator</i>	Red-breasted Merganser		LC	NT	
			North-west & Central Europe (win)			STA/DEC?
			North-east Europe/Black Sea & Mediterranean			DEC?
			Western Siberia/South-west & Central Asia			DEC?
13	<i>Somateria mollissima</i>	Common Eider		NT	VU	
			<i>mollissima</i> , Baltic, Denmark & Netherlands			STA/FLU
			<i>mollissima</i> , Norway & Russia			STA/INC
			<i>borealis</i> , Svalbard & Franz Joseph (bre)			DEC?
14	<i>Somateria spectabilis</i>	King Eider		LC	LC	
			East Greenland, NE Europe & Western Siberia			STA
15	<i>Polysticta stelleri</i>	Steller's Eider		VU	LC	
			Western Siberia/North-east Europe			STA

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
16	<i>Aythya marila</i>	Greater Scaup		LC	VU	
			<i>marila</i> , Northern Europe/Western Europe			DEC
			<i>marila</i> Western Siberia/Black Sea & Caspian			DEC?
Gaviidae						
17	<i>Gavia adamsii</i>	Yellow-billed Loon		NT	VU	
			Northern Europe (win)			STA?
18	<i>Gavia arctica</i>	Arctic Loon		LC	LC	
			<i>arctica</i> , Northern Europe & Western Siberia/Europe			DEC?
			<i>arctica</i> , Central Siberia/Caspian			Unknown
19	<i>Gavia immer</i>	Common Loon		LC	VU	
			Europe (win)			DEC?
20	<i>Gavia stellata</i>	Red-throated Loon		LC	LC	
			North-west Europe (win)			STA?
			Caspian, Black Sea & East Mediterranean (win)			STA
Fregatidae						
21	<i>Fregata ariel</i>	Lesser Frigatebird		LC		
			<i>iredalei</i> , W Indian Ocean			STA
22	<i>Fregata minor</i>	Great Frigatebird		LC		
			<i>aldabrensis</i> , W Indian Ocean			Unknown
Laridae						
23	<i>Larus argentatus</i>	European Herring Gull		LC	NT	
			<i>argentatus</i> , North & North-west Europe			DEC
			<i>argentatus</i> , Iceland & Western Europe			DEC

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
24	<i>Larus armenicus</i>	Armenian Gull		NT	NT	
			Armenia, Eastern Turkey & NW Iran			DEC
25	<i>Larus audouinii</i>	Audouin's Gull		LC	LC	
			Mediterranean/N & W coasts of Africa			STA
26	<i>Larus cachinnans</i>	Caspian Gull		LC	LC	
			Black Sea & Western Asia/SW Asia, NE Africa			INC?
27	<i>Larus canus</i>	Mew Gull		LC	LC	
			<i>canus</i> , NW & C Europe/Atlantic coast & Mediterranean			STA/FLU
			<i>heinei</i> , NE Europe & Western Siberia/Black Sea & Caspian			STA/INC?
28	<i>Larus cirrocephalus</i>	Grey-headed Gull		LC		
			<i>poiocephalus</i> , West Africa			STA/FLU
			<i>poiocephalus</i> , Central, Eastern and Southern Africa			STA?
29	<i>Larus dominicanus</i>	Kelp Gull		LC		
			<i>vetula</i> , Coastal Southern Africa			DEC?
			<i>vetula</i> , Coastal West Africa			INC
30	<i>Larus fuscus</i>	Lesser Black-backed Gull		LC	LC	
			<i>heuglini</i> , NE Europe & W Siberia/SW Asia & NE Africa			Unknown
			<i>barabensis</i> , South- west Siberia/South- west Asia			Unknown

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
			<i>fuscus</i> , NE Europe/Black Sea, SW Asia & Eastern Africa			DEC
			<i>graellsii</i> , Western Europe/Mediterranean & West Africa			DEC
			<i>intermedius</i> , S Scandinavia, Netherlands, Ebro Delta, Spain			INC
31	<i>Larus genei</i>	Slender-billed Gull		LC	LC	
			West Africa (bre)			STA/DEC?
			Black Sea & Mediterranean (bre)			DEC
			West, South-west & South Asia (bre)			UNC
32	<i>Larus glaucooides</i>	Iceland Gull		LC	LC	
			<i>glaucooides</i> . Greenland/Iceland & North-west Europe			STA?
33	<i>Larus hartlaubii</i>	Hartlaub's Gull		LC		
			Coastal South-west Africa			DEC?
34	<i>Larus hemprichii</i>	Sooty Gull		LC		
			Red Sea, Gulf, Arabia & Eastern Africa			INC?
35	<i>Larus hyperboreus</i>	Glaucous Gull		LC	LC	
			<i>hyperboreus</i> , Svalbard & N Russia (bre)			STA/INC?
			<i>leucereetes</i> , Canada, Greenland & Iceland (bre)			STA/DEC?
36	<i>Larus ichthyaetus</i>	Pallas's Gull		LC	LC	
			Black Sea & Caspian/South-west Asia			Unknown
37	<i>Larus leucophthalmus</i>	White-eyed Gull		NT		

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
			Red Sea & nearby coasts			STA
38	<i>Larus marinus</i>	Great Black-backed Gull		LC	LC	
			North & West Europe			DEC
39	<i>Larus melanocephalus</i>	Mediterranean Gull		LC	LC	
			W Europe, Mediterranean & NW Africa			INC
40	<i>Larus michahellis</i>	Yellow-legged Gull		LC	LC	
			Mediterranean, Iberia & Morocco			STA
41	<i>Larus ridibundus</i>	Black-headed Gull		LC	LC	
			W Europe/W Europe, W Mediterranean, West Africa			STA/DEC?
			East Europe/Black Sea & East Mediterranean			STA/FLU
			West Asia/SW Asia & NE Africa			STA/FLU
42	<i>Xema sabini</i>	Sabine's Gull		LC	LC	
			<i>sabini</i> , Canada & Greenland/SE Atlantic			Unknown
43	<i>Hydrocoloeus minutus</i>	Little Gull		LC	NT	
			Central & E Europe/SW Europe & W Mediterranean			DEC
			W Asia/E Mediterranean, Black Sea & Caspian			DEC?
44	<i>Rissa tridactyla</i>	Black-legged Kittiwake		VU	VU	
			<i>tridactyla</i> , Arctic from NE Canada to Novaya Zemlya/N Atlantic			DEC
45	<i>Anous stolidus</i>	Brown noddy		LC		
			<i>plumbeigularis</i> , Red Sea & Gulf of Aden			Unknown

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
46	<i>Anous tenuirostris</i>	Lesser noddy		LC		
			<i>tenuirostris</i> , Indian Ocean Islands to E Africa			Unknown
47	<i>Chlidonias niger</i>	Black Tern		LC	LC	
			<i>niger</i> , Europe & Western Asia/Atlantic coast of Africa			DEC?
48	<i>Gelochelidon nilotica</i>	Common Gull-billed Tern		LC	LC	
			<i>nilotica</i> , Western Europe/West Africa			STA/FLU
			<i>nilotica</i> , Black Sea & East Mediterranean/Eastern Africa			DEC
			<i>nilotica</i> , West & Central Asia/South- west Asia			UNC
49	<i>Hydroprogne caspia</i>	Caspian Tern		LC	LC	
			Southern Africa (bre)			STA/INC?
			West Africa (bre)			STA/INC?
			Caspian (bre)			INC?
			Baltic (bre)			INC
			Black Sea (bre)			STA
50	<i>Onychoprion anaethetus</i>	Bridled Tern		LC		
			<i>melanopterus</i> , W Africa			STA?
			<i>antarcticus</i> , W Indian Ocean			STA
			<i>antarcticus</i> , Red Sea, E Africa, Persian Gulf, Arabian Sea to W India			STA
51	<i>Onychoprion fuscatus</i>	Sooty Tern		LC		
			<i>nubilosa</i> , Red Sea, Gulf of Aden, E to Pacific			Unknown

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
52	<i>Sterna dougallii</i>	Roseate Tern		LC	LC	
			<i>dougallii</i> , East Africa			Unknown
			<i>dougallii</i> , Europe (bre)			INC
			<i>gracilis</i> , North Arabian Sea (Oman)			DEC
			<i>dougallii</i> , Southern Africa and Madagascar			Unknown
			<i>gracilis</i> , Seychelles & Mascarenes			Unknown
53	<i>Sterna hirundo</i>	Common Tern		LC	LC	
			<i>hirundo</i> , Northern & Eastern Europe (bre)			INC
			<i>hirundo</i> , Southern & Western Europe (bre)			DEC?
			<i>hirundo</i> , Western Asia (bre)			Unknown
54	<i>Sterna paradisaea</i>	Arctic Tern		LC	LC	
			Western Eurasia (bre)			STA?
55	<i>Sterna repressa</i>	White-cheeked Tern		LC		
			W South Asia, Red Sea, Gulf & Eastern Africa			UNC
56	<i>Sterna vittata</i>	Antarctic Tern		LC		
			<i>vittata</i> , P.Edward, Marion, Crozet & Kerguelen/South Africa			Unknown
			<i>tristanensis</i> , Tristan da Cunha & Gough/South Africa			Unknown
57	<i>Sternula albifrons</i>	Little Tern		LC	LC	
			<i>albifrons</i> , Black Sea & East Mediterranean (bre)			DEC
			<i>albifrons</i> , Caspian (bre)			Unknown
			<i>guineae</i> , West Africa (bre)			Unknown

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
			<i>albifrons</i> , Europe north of Mediterranean (bre)			STA
			<i>albifrons</i> , West Mediterranean/ W Africa (bre)			DEC
58	<i>Sternula balaenarum</i>	Damara Tern		VU		
			Namibia & South Africa/Atlantic coast to Ghana			DEC?
59	<i>Sternula saundersi</i>	Saunders's Tern		LC		
			W South Asia, Red Sea, Gulf & Eastern Africa			STA?
60	<i>Thalasseus bengalensis</i>	Lesser Crested Tern		LC		
			<i>emigratus</i> , S Mediterranean/NW & West Africa coasts			STA
			<i>bengalensis</i> , Red Sea/Eastern Africa			UNC
			<i>bengalensis</i> , Gulf/Southern Asia			INC
61	<i>Thalasseus bergii</i>	Greater Crested Tern		LC		
			<i>bergii</i> , Southern Africa (Angola - Mozambique)			INC?
			<i>bergii</i> , Madagascar & Mozambique/Southern Africa			STA/FLU
			<i>thalassinus</i> , Eastern Africa & Seychelles			STA/FLU
			<i>velox</i> , Red Sea & North-east Africa			Unknown
62	<i>Thalasseus maximus</i>	Royal Tern		LC		
			<i>albidorsalis</i> , West Africa (bre)			STA/FLU
63	<i>Thalasseus sandvicensis</i>	Sandwich Tern		LC	LC	
			<i>sandvicensis</i> , Western Europe/West Africa			INC

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
			<i>sandvicensis</i> , Black Sea & Mediterranean (bre)			STA/FLU
			<i>sandvicensis</i> , West & Central Asia/South-west & South Asia			Unknown
Pelecanidae						
64	<i>Pelecanus onocrotalus</i>	Great White Pelican		LC	LC	
			West Africa			INC/STA
			Eastern Africa			DEC?
			Southern Africa			INC?
			Europe & Western Asia (bre)			INC
Phaethontidae						
65	<i>Phaethon aethereus</i>	Red-billed Tropicbird		LC		
			<i>aethereus</i> , South Atlantic			STA
			<i>indicus</i> , Persian Gulf, Gulf of Aden, Red Sea			STA
66	<i>Phaethon lepturus</i>	White-tailed Tropicbird		LC		
			<i>lepturus</i> , W Indian Ocean			STA
67	<i>Phaethon rubricauda</i>	Red-tailed Tropicbird		LC		
			<i>rubricauda</i> , Indian Ocean			INC
Phalacrocoracidae						
68	<i>Phalacrocorax capensis</i>	Cape Cormorant		EN		
			Coastal Southern Africa			DEC
69	<i>Phalacrocorax carbo</i>	Great Cormorant		LC	LC	
			<i>carbo</i> , North-west Europe			DEC
			<i>sinensis</i> , Northern & Central Europe			INC/STA

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			<i>sinensis</i> , Black Sea & Mediterranean			STA
			<i>sinensis</i> , West & South-west Asia			STA?
			<i>lucidus</i> , Central & Eastern Africa			INC?
			<i>lucidus</i> , Coastal West Africa			INC?
			<i>lucidus</i> , Coastal Southern Africa			STA?
70	<i>Phalacrocorax neglectus</i>	Bank Cormorant		EN		
			Coastal South-west Africa			DEC
71	<i>Phalacrocorax nigrogularis</i>	Socotra Cormorant		VU		
			Arabian Coast			DEC
			Gulf of Aden, Socotra, Arabian Sea			STA/INC
72	<i>Microcarbo coronatus</i>	Crowned Cormorant		NT		
			Coastal South-west Africa			STA
Podicipedidae						
73	<i>Podiceps auritus</i>	Horned Grebe		VU	NT	
			<i>auritus</i> , North-west Europe (large-billed)			DEC/STA
			<i>auritus</i> , North-east Europe (small-billed)			DEC?
			<i>auritus</i> , Caspian & South Asia (win)			UNC
74	<i>Podiceps cristatus</i>	Great Crested Grebe		LC	LC	
			<i>cristatus</i> , North-west & Western Europe			STA/DEC?
			<i>cristatus</i> , Black Sea & Mediterranean (win)			STA/INC?
			<i>cristatus</i> , Caspian & South-west Asia (win)			DEC?
			<i>infuscatus</i> , Eastern Africa (Ethiopia to N Zambia)			UNC
			<i>infuscatus</i> , Southern Africa			INC

	Species	Common Name	Population	IUCN Red List Category* Global	IUCN Red List Category* Europe	Population trend CSR7
75	<i>Podiceps grisegena</i>	Red-necked Grebe		LC	LC	
			<i>grisegena</i> , North-west Europe (win)			INC
			<i>grisegena</i> , Black Sea & Mediterranean (win)			STA
			<i>grisegena</i> , Caspian (win)			Unknown
76	<i>Podiceps nigricollis</i>	Black-necked Grebe		LC	LC	
			<i>nigricollis</i> , Europe/South & West Europe & North Africa			DEC?
			<i>nigricollis</i> , Western Asia/South-west & South Asia			DEC?
			<i>gurneyi</i> , Southern Africa			INC
Scolopacidae						
77	<i>Phalaropus fulicarius</i>	Red Phalarope		LC	LC	
			Canada & Greenland/Atlantic coast of Africa			DEC?
78	<i>Phalaropus lobatus</i>	Red-necked Phalarope		LC	LC	
			Western Eurasia/Arabian Sea			STA?
Stercorariidae						
79	<i>Catharacta skua</i>	Great Skua		LC	LC	
			N Europe/N Atlantic			DEC
80	<i>Stercorarius longicaudus</i>	Long-tailed Skua ¹		LC	LC	
			<i>longicaudus</i> , N Europe & W Siberia/S Atlantic			STA/FLU

¹ BirdLife International uses the common name 'Long-tailed Jaegar'.

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Spheniscidae						
81	<i>Spheniscus demersus</i>	African Penguin		EN		
			Southern Africa			DEC
Sulidae						
82	<i>Morus bassanus</i>	Northern Gannet		LC	LC	
			North Atlantic			INC
83	<i>Morus capensis</i>	Cape Gannet		EN		
			Southern Africa			DEC
84	<i>Sula dactylatra</i>	Masked Booby		LC		
			<i>melanops</i> , W Indian Ocean			Unknown