OSPAR COMMISSION

Background document for Lesser black backed gull *Larus fuscus fuscus*

Biodiversity Series

2009

OSPAR Convention

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the “OSPAR Convention”) was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. It has been ratified by Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland and the United Kingdom and approved by the European Community and Spain.

Convention OSPAR

La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998. La Convention a été ratifiée par l'Allemagne, la Belgique, le Danemark, la Finlande, la France, l’Irlande, l’Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d’Irlande du Nord, la Suède et la Suisse et approuvée par la Communauté européenne et l’Espagne.

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This report has been prepared by Dr Nigel Varty and Ms Kate Tanner for BirdLife International as lead party for the Lesser black backed gull.

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Background Document for Lesser black backed gull *Larus fuscus fuscus*

Executive Summary

This background document on the Lesser black backed gull – *Larus fuscus fuscus* - has been developed by OSPAR following the inclusion of this species on the OSPAR List of threatened and/or declining species and habitats (OSPAR agreement 2008-6). The document provides a compilation of the reviews and assessments that have been prepared concerning this species since the agreement to include it in the OSPAR List in 2003. The original evaluation used to justify the inclusion of *Larus fuscus fuscus* in the OSPAR List is followed by an assessment of the most recent information on its status (distribution, population, condition) and key threats prepared during 2008-2009. Chapter 7 provides recommendations for the actions and measures that could be taken to improve the conservation status of the species. On the basis of these recommendations, OSPAR will continue its work to ensure the protection of *Larus fuscus fuscus*, where necessary in cooperation with other organisations. This document may be updated to reflect further developments.

Récapitulatif

Le présent document de fond sur le *goéland brun* a été élaboré par OSPAR à la suite de l'inclusion de cette espèce dans la liste OSPAR des espèces et habitats menacés et/ou en déclin (Accord OSPAR 2008-6). Ce document comporte une compilation des revues et des évaluations concernant cette espèce qui ont été préparées depuis qu'il a été convenu de l'inclure dans la Liste OSPAR en 2003. L'évaluation d'origine permettant de justifier l'inclusion du *goéland brun* dans la Liste OSPAR est suivie d'une évaluation des informations les plus récentes sur son statut (distribution, population, condition) et des menaces clés, préparée en 2008-2009. Le chapitre 7 recommande des actions et mesures à prendre éventuellement afin d'améliorer l'état de conservation de l'espèce. OSPAR poursuivra ses travaux, en se fondant sur ces recommandations, afin de s'assurer de la protection du *goéland brun*, le cas échéant en coopération avec d'autres organisations. Le présent document pourra être actualisé pour tenir compte de nouvelles avancées.

1. Background Information

Name of species

*Larus fuscus fuscus l*esser black backed gull

Ecology and breeding biology

Larus fuscus fuscus is a migratory species, leaving the breeding areas from August to fly south to the Black Sea and the eastern part of the Mediterranean and Africa. Breeding colonies are often situated many kilometers inland, often on bogs or other flat areas or on small islands nearly always with rich dense vegetation. *L.fuscus* is a surface predator and feeds mainly on Atlanto-Scandic herring, *Clupea harengus* and sprat, *Sprattus sprattus* (Strann, 1992)[1].

[1] In northern Norway, the species is a typical offshore feeder with a very limited terrestrial diet, and only infrequently feeds at rubbish dumps, although this has been reported in Finland to some extent.

2. Original Evaluation against the Texel-Faial selection criteria

List of OSPAR Regions and Dinter biogeographic zones where the species occurs

OSPAR Region I
Dinter biogeographic zones: Norwegian Coast (Finnmark), Norwegian Coast (Westnorwegian)

List of OSPAR Regions and Dinter biogeographic zones where the species is under threat and/or in decline

All where it occurs

Original evaluation against the Texel-Faial criteria for which the species was included on the OSPAR List

The subspecies *L.f.fuscus* was nominated by one Contracting Party (Norway), and first listed by OSPAR 2003. The criteria cited were decline, rarity and sensitivity, with information also provided on threat.

Regional importance. At the time of listing, the total population of the *fuscus* subspecies was believed to be under 15 000 pairs, of which about 2500 pairs bred within the Barents Sea on the Norwegian and Russian coasts (Anker-Nilssen *et al*., 2000).

Decline. The ICES evaluation of this nomination (ICES, 2002) was based on compelling evidence of a decline in the numbers of *L.f.fuscus*, estimated at 90% since 1970. The evidence of a marked decline in breeding numbers of *Lf.fuscus* in northern Norway was considered very strong. The species was also reported to have disappeared from the Murman coast and the north-western White Sea of Russia (Anker-Nilssen *et al*., 2000).

Rarity. At the time of listing, the subspecies had a relatively small population and limited number of breeding sites, and was considered a rare sub-species in OSPAR Region I.

Sensitivity. *L.f.fuscus* was listed as sensitive due to the small numbers breeding at a very limited number of locations. It was considered to be particularly sensitive to disturbance, predation, and oil pollution.

Threats. The case report for this species cites the likely principal threats as man-made pollution such as PCBs, decline in prey species, and competition with and predation by the herring gull *Larus argentatus*.

3. Current status of the species

Distribution in OSPAR maritime area

The species has a complicated systematics: 5 subspecies of *L.fuscus* have been described and the classification is widely accepted (ICES, 2002). The subspecies, *L. fuscus fuscus* breeds in Sweden and northern Norway across to the western part of the Kola Peninsula and the western White Sea and accidentally on Bjørnoya, and also in Estonia and in very small numbers in eastern Denmark (Strann, Semashko and Cherenkov, in Anker-Nilssen *et al*., 2000; Wetlands International, 2006; Thomas Bregnballe *in litt.* 2008)[2]. In Finland, the subspecies breeds through southern and central Finland but is a rare breeder in the north. Most of those breeding in Sweden, Finland and Denmark breed within the Baltic Sea basin and so originate outside the OSPAR area but some of these birds may move into OSPAR waters to feed or after breeding.

[2] At least two other subspecies breed within the OSPAR Region: *L.f.graellsii* breeds in north-west Spain, France, the UK and Ireland, and Iceland, and *L.f.intermedius* breeds in the Netherlands, Germany, Denmark and southern Norway.

L.f.fuscus is a true long-distance migrant, using the East European – Black Sea migration flyway. A varying number stay in the eastern Mediterranean down to Ethiopia, but the bulk of the population flies to winter in the Great Lakes region of Kenya, Tanzania, and Uganda. In Uganda, the largest concentrations occur at Lake Victoria and the water bodies of the western (Albertine) Rift Valley, notably Queen Elizabeth National Park. Birds stay here from October - November to March - April, with groups of up to 500 - 700 birds occurring[3]. A few birds also winter in south-west Asia (Wetlands International, 2006). Apart from a limited northward migration, immature birds remain in the wintering areas through the summer. The adults arrive on the breeding grounds in late May and early June (del Hoyo *et al.* 1996; Malling Olsen and Larsson, 2004).

Population (current/trends/future prospects)

The global population of *L.fuscus* (all subspecies) is put at 680 000 - 750 000 (BirdLife International 2008). The European breeding population is considered large (>300 000 pairs), with 5000 - 7000 pairs in Finland, 30 000 - 40 000 pairs in Norway, 4000 - 5700 pairs in European Russia, and 2000 - 5000 in Sweden and 4000 - 6000 pairs in Denmark, but these are for all subspecies and not exclusively *L.f.fuscus* (BirdLife International 2004). Recent national surveys resulted in estimate of 18 000 - 19 000 pairs (or 54 000 - 57 000 individuals) for the *fuscus* subspecies (Wetlands International, 2006). The Norwegian population is put at *c*. 1300 pairs (Barrett *et al.* 2006), which represents 6 - 7% of the world population of *L.f.fuscus*. A national survey carried out in Finland in 2003, gave a total population estimate of 8300 pairs (BirdLife Finland), representing around 45% of the world population. Trends are difficult to analyse as early population estimates did not differentiate between subspecies and included *intermedius* in surveys in Denmark, southern Norway and Sweden in this population (Wetlands International, 2006).

Norway. Although no complete census was ever made, the population of the *fuscus* subspecies in the 1960s was probably at least 3000 - 4000 pairs (Haftorn, 1971) but had declined to around 1300 pairs by 2005 (comprising about 1000 pairs along the Norwegian Sea coast and 300 pairs in the Barents Sea region), and the *fuscus* subspecies is now considered extinct in the Lofoten Islands (Barrett *et al.,* 2006). In colonies monitored in Nord-Trøndelag and Sør-Helgeland, declines of 5 - 10% p.a. have been recorded since 1980 and up to the mid-1990s. An increase in numbers was recorded for the first time in Helgeland (considered to be the core area for this subspecies along the Norwegian coast) between 1996 and 2005. An overall decline of 5.4%/year was reported by Barrett *et* al. (2006) over a 15 year period (1980 - 1995)[4] at their study sites in northern Norway.

Sweden. The *L.fuscus* population in Sweden has decreased from 17 000 breeding pairs in the seventies to 4000 - 5000 at its lowest point in the 1990s (Gärdenfors, 2005). A study in 2003 - 04 (Lif *et al.,* 2005) showed that the *L.f.fuscus* had begun to recover from the decrease in the nineties but had, for unknown reasons, an unsustainable low breeding success. Survey results from 2006 estimated that there were over 8300 pairs of *L.f.fuscus* – showing a small increase since the 1990s (Axbrink, 2007).

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[3] Satellite tracking of a juvenile bird from a breeding area in Finland found that it travelled to Lake Victoria in 1 month (29 August to 29 September 1999), and made its final non-stop journey from the Nile delta to Lake Victoria, a distance of around 3 500 km, in 92 hours (average 38 km/h) (Kube *et al.,* 2000).

[4] By contrast, the population of the *intermedius* subspecies in Norway has increased greatly since the 1960s, when the population was estimated to be 5800 pairs (Barth, 1968). Monitoring has shown that despite large annual variations, this increase has continued at least in the Skagerrak region (area off Southern Norway between the Baltic and North Sea) at a rate of 1 - 5% p.a. since 1974. However, there seems to have been a reversal of this trend in recent years with numbers falling again at a rate of 4% p.a. No monitoring data for *L. f. intermedius* exist for the North Sea and Norwegian Sea coastlines.

Finland. The *fuscus* subspecies was also believed to have declined at a high rate (8%/year) in Finland between 1986 - 2002 (Hario *et al.,* 1998; Anker-Nilssen *et al.,* 2000; BirdLife International, 2004). However, based on a national survey in 2003, the population in Finland is thought to have decreased only slightly during the previous 10 years. In the inland areas, the population is probably stable, but the subspecies is still decreasing slightly in the south and in some areas on the west coast (Teemu Lehtiniemi *in litt*. 2008).

The cause(s) of the decline[5] are unknown but may be related to food shortages during the breeding season or, as proposed for the Finnish population, high chick mortality caused by elevated levels of DDE in adults picked up in the wintering areas in East Africa (Strann and Vader, 1992; Anker-Nilssen *et al.,* 2000; Bakken *et al.,* 2003; Hario *et al.,* 2004).

Condition (current/trends/future prospects)

A recent study at Stora Karlsö, Sweden (Capandegui, 2006) found that breeding success of *L.f.fuscus* was too low to sustain the colonies (0.08 chicks/pair; expected breeding success to maintain the colonies was 0.45 chicks/pair). 83% of the chicks in the census disappeared without a known cause, although predation by *L. argentatus* and *L. marinus* may have been to blame.

In Finland, breeding success was found to vary between regions in 2003. In some areas pairs produced 1.5 fledglings/pair (north-west archipelago), but in most areas fledgling success was much lower at 0.5 - 0.9/pair. Predation by introduced American mink *Mustela vison* and human disturbance were considered the most important causes of chick mortality. In the southern archipelago, predation by herring gull *L. argentatus* reduced breeding success.

Another study in Finland found evidence of death by disease of the third chick in broods with three chicks - the chicks were too weak to digest food given by parents and suffered from rapid loss of body weight (Hario *et al.,* 1999).

Limitations in knowledge

There is strong evidence of a decline in the number of breeding *L.f.fuscus* but only hypotheses on the causes of the decline at the present time, and the extent to which the decline in numbers of *L.f.fuscus* can be attributed to natural variability as opposed to other factors is unknown. In some areas, counts of *L.fuscus* have not been separated according to subspecies in the past, which makes analysis of population trends and interactions between the different subspecies, particularly between *L.f.intermedius* and *L.f.fuscus*, problematic.

4. Evaluation of threats and impacts

Causes of the decline of *L. f. fuscus* are not well understood although several have been suggested and are summarized in Anker-Nilssen *et al*. (2000). Strann and Vader (1992) have suggested that a lack of food resources could be one factor in the declines. A lack of post-larvae herring results in starvation and large-scale mortality of the chicks shortly after hatching, and there was a near total collapse of the huge stock of herring in the late 1960s along the southern part of the Norwegian coast, which was accompanied by a decrease in the population of *L.fuscus* there. However, whether the lack of food is linked to fisheries is unclear.

[5] There has also been a marked reduction in the population of the *fuscus* subspecies in neighbouring areas of Russia. The species no longer breeds along the Murman coast or the north-western part of the White Sea of Russia (it has declined in the northern part of Karelia since the 1920s and in the southern part since the 1950s), although it bred in a few colonies in Onezhski Bay in the southern part of the White Sea which showed an increase at least until the early 1990s when the population was estimated to be *c.*1600 pairs (Anker-Nilssen *et al*. 2000).

Studies of *L.f.fuscus* in Sweden also suggest that predation by herring gull *L.argentatus* is a major cause of loss of chicks on the breeding grounds, although predation by greater black-backed gulls *L.marinus* is also considered a problem (Lif *et al.*, 2005). Inter-specific competition for nesting grounds between *L argentatus* and *L.f. fuscus* has also been postulated as a cause for the decline in populations. *L.argentatus* is bigger, more aggressive and has a wider range of food sources (Strann, 1992) and is expected to have a greater number of nests and breeding success.

Diseases and toxins have also been suggested as a possible cause for the population decline[6]. Contamination by pollutants (*e.g.* PCBs, DDE, DDT) is believed to reduce fitness and survival, particularly of the chicks. Pollutants badly affecting chick survival (causing up to 70% mortality of chicks in the Gulf of Finland) are taken in by the parents in their winter ranges in Africa. Parents seem to be prone to bioaccumulation from numerous point sources of toxicants (P Adriaens *in litt,* 2008). Diseases due to the degeneration of the liver and various other internal organs were found to be the main cause of the exceedingly high chick mortality in *L.f.fuscus* in the central Gulf of Finland, Baltic Sea, during 1991 – 1993 (Hario *et al.,* 1996).

Exposure to oil pollution may also be a problem for coastal colonies. At Saltholm, in Denmark, for instance, *L.f.fuscus* breeds among *L.argentatus* whose eggs have become oiled each year (including 2007), due to the colnoy's proximity to Copenhagen airport), and it is very likely that eggs of *fuscus* become oiled as well (Thomas Bregnballe, *in litt*. 2008).

There is also some evidence of intra-specific competition between *L.f.fuscus* and *L.f.intermedius*. For instance, *L.f.intermedius* is now becoming established in the former breeding range of *fuscus* north to at least Loppa in Finnmark. *L.f.intermedius* is larger and stronger and appears to be more successful at coping with *L.argentatus*, which predate eggs and chicks, in mixed colonies. Another potential threat is inter-breeding with the *L.f.intermedius* population. Data on mixed breeding are scarce, but recent studies have shown there is unrestricted gene flow between *L.f.fuscus* and *L.f.graellsii/intermedius* (P Adriaens *in litt.,* 2008)[7].

5. Existing Management measures

The lesser black backed gull is listed on Annex II of the EU Birds Directive but not the subspecies *L.f.fuscus*. BirdLife International (2004) gives the species (again, not the *fuscus* subspecies) a non-SPEC[8] status, although it was listed as SPEC 4 (favourable conservation status (secure) but concentrated in Europe) in 1994. The species as a whole is not regarded as threatened, but *L.f.fuscus* is listed in the Red Data books of Finland, Sweden, Norway, Estonia and Russian Karelia (Gärdenfors, 1999; Lorentsen, 2004; Hario, 2005). Consequently, the *fuscus* subspecies is classified as threatened over virtually its entire range, falling into either the Endangered and Vulnerable categories in the IUCN Red list categories.

Regional hunting of gulls was banned in Denmark south of latitude 55 40' N in 2004, in order to increase the protection of (Baltic) *L.f.fuscus*, but there is no other national protection. In Finland, *L.fuscus* is protected under the Luonnonsuojelulaki 20.12.1996/1096 (Nature Conservation Act), but there are no direct conservation measures targeted at the species/subspecies, although it benefits indirectly from predator control of game species. However, BirdLife Finland usually carries out

[6] The Baltic Sea has been noted for its pollution since the 1970s, although there are signs of recovery, *e.g*. increase in seal population (Olsson *et al.*, 2005).

[7] Recent analyses of the phylogeography of lesser black-backed gulls (Liebers and Helbig, 2002; Crotchet, 2002), suggests that there is little evidence for separating *fuscus* and *intermedius/graellsii*, both phenotypically and genetically.

[8] SPEC = Species of European Conservation Concern

education and awareness raising activities on seabirds each summer through articles in the press, and was particularly active in 2003 when the last national surveys were being conducted.

Monitoring in coastal areas in Finland is undertaken by the Finnish Game and Fisheries Research Institute, although from 2009 the organisation Metsähallitus will probably be taking on this role (Teemu Lehtiniemi *in litt.* 2008). Monitoring of *L.fuscus* in inland colonies is carried out mostly by local ornithological societies. There has also been long-term research into the breeding and migration of *L.fuscus*, and the threat from environmental toxins in Finland (Hario *et al.,* 1993; Hario *et al.,* 1996; Hario *et al.,* 1999; Hario *et al*., 2003), with substantial ringing of birds (Teemu Lehtiniemi *in litt.* 2008). In Norway, including Svalbard and adjacent marine areas, seabird monitoring and mapping is carried out as part of the SEAPOP (SEAbird POPulations) programme, which was established in 2005 (Anker-Nilssen *et al.,* 2007). The programme aims to provide and maintain base-line knowledge of seabirds for an improved management of the marine environment. The data analyses aim to develop further models of seabird distribution and population dynamics using different environmental parameters, and to explore the degree of co-variation across different sites and species, which will allow scientists to distinguish human influences from those caused by natural variation. Barrett *et al.* (2006) give 24 colonies of *L.f.fuscus* monitored in Norway between 1980 and 2005 (with maximum of 17 years counted), although these were all relatively small colonies located in one restricted area (Sør-Helgeland). In Sweden, population monitoring and research has been undertaken at Stora Karlsö and Lilla Karlsö (Lif *et al.,* 2005), in the Baltic Sea area from 1976 to 2004. The former is a nature reserve and hence the breeding sites are relatively undisturbed[9].

6. Conclusion on overall status

Within the OSPAR Region, the subspecies, *L. fuscus fuscus* only breeds in northern Norway, Sweden, Finland (Region I), and (in very small numbers) in eastern Denmark (Region II). It largely winters in the Great Lakes region of East Africa. Recent estimates put the global population at 18 000 - 19 000 pairs (or 54 000 - 57 000 individuals) for the *fuscus* subspecies (Wetlands International, 2006), with around 1300 pairs in Norway (Barrett *et al.* 2006), and 8300 pairs in Finland (BirdLife Finland), and 4000 - 5000 pairs in Sweden (Gärdenfors, 2005). However, the majority of the birds in Sweden, Finland and Denmark breed within the Baltic area (outside of the OSPAR area). Trends are difficult to analyse as early population estimates did not differentiate between subspecies and included *L.f.intermedius* in surveys in Denmark, southern Norway and Sweden in this population (Wetlands International, 2006) but there is evidence of a significant decline both within the OSPAR Region and in neighbouring areas of Russia. The cause(s) of the decline are unknown but may be related to food shortages during the breeding season, high chick mortality caused by elevated levels of DDE and other pollutants picked up by adults in their wintering areas in East Africa, inter-specific competition with or predation by other (larger and more aggressive) gulls or intra-specific competition with *L.f.intermedius*. There is some monitoring of *L.f.fuscus* populations in Norway, Sweden and Finland, and several Important Bird Areas occur within its range but there are no specific conservation measures targeted at protecting the subspecies and the (possible) threats are uncontrolled. Consequently, it continues to qualify under the OSPAR criteria due to its small population size and

[9] *L.fuscus* is recorded at 5 Important Bird Areas (IBAs) in Denmark (Hirsholmene, Nordre Rønner, Northwestern Kattegat, Ørkenen and Totten (Anholt Island), and Stavnsfjord and adjacent waters), 8 in Finland (Itäinen Suomenlahti National Park, Keski-Kallavesi and Kuhanen Lake, Kokkola and Kälviä archipelago, Krunnit archipelago, Merenkurkku archipelago, Oura and Enskeri archipelagos, Rahja archipelago, Uusikaarlepyy archipelago), 3 sites in Norway (Kjørholmane seabird reserve, Lista wetland system, and Skjernøy in the South Skerries), and one IBA in Sweden (Outer Stockholm archipelago) (BirdLife International, 2008). However, it is not clear how many of these support the *fuscus* subspecies. It is also known to occur at one IBA in (European) Russia (Dolgy Reef and Bol'shoi Fiskar Archipelago).

decline within the OSPAR area, small number of breeding sites, uncontrolled threats (particularly rats and cats at breeding sites), and inadequate conservation measures.

7. Action should be taken at an OSPAR level?

Action/measures that OSPAR could take, subject to OSPAR agreement

OSPAR Actions

Communication: OSPAR should contact HELCOM, the Arctic Council (CAFF), NEAFC, governments in the wintering range of the species (i.e. Uganda, Kenya, Tanzania), plus authorities in neighbouring areas of Russia (Murman, Kola peninsula) to:

a. notify them of listing under OSPAR, threats facing the species, and the willingness of OSPAR to co-operate in developing conservation measures.

b. request information on any measures taken for the protection of *L.f.fuscus* and the efficacy of any measures taken;

c. recommend protection from predation at breeding colonies (Arctic Council (CAFF), and Russia);

d. recommend protection of marine areas in the Baltic used by this species as MPAs under HELCOM;

e. invite cooperation on the development of a species action plan for *L.f.fuscus* (CAFF);[10]

Awareness raising: OSPAR should work with relevant Contracting Parties (see Table 1 below) to raise awareness of the status of and threats to *L.f.fuscus* among both management authorities and the general public[11].

Species Action Plan: OSPAR should work with relevant Contracting Parties to facilitate development of a species action plan for *L.f.fuscus,* involving relevant international authorities *e.g.* CAFF.

Further research: OSPAR should emphasise to relevant scientific funding bodies the following research needs with respect to *L.f.fuscus:*

a. further research into causes of decline, including possible link to food availability and intra-specific competition between *L.f.fuscus* and *L.f.intermedius*;

b. further research on ecology of this species at the wintering grounds in Africa.

Actions/measures for relevant Contracting Parties

OSPAR should recommend that relevant Contracting Parties undertake the following actions and measures, and establish a mechanism by which Contracting Parties report back on the implementation of these actions and measures, and the implementation of the monitoring and assessment strategy, so that the progress can be evaluated in conjunction with the future assessment of the status of the species:

a. Monitoring: monitor and assess species status in OSPAR Area – continue and expand existing monitoring of breeding colonies to include demographic parameters, and feeding

[10] Cooperation with CAFF on this species may not be feasible as they have a general focus on circumpolar species.

[11] This could perhaps best be achieved, at least initially, through a brochure and accompanying web site that lists all OSPAR Listed features, the threats they face, and recommended conservation actions.

of chicks, especially in northern part of the range, to clarify whether food shortage is the main reason why young are not being produced;

b. MPAs: identify the main existing protected areas supporting populations of *L.f.fuscus,* and their conservation status;

c. MPAs: protect sites important to this species as OSPAR MPAs, with management plans for these MPAs that include conservation of *L.f.fuscus* and the need for protection from predation at breeding colonies.

Table 1: Summary of key threats and existing protection for *Larus fuscus fuscus*

Key threats	Decline in prey fish species (*e.g.* herring) Competition and predation at the breeding sites by herring gull *Larus argentatus.* Contamination by man-made pollutants such as PCBs, DDE, DDT (known for Baltic populations)	
Relevant Contracting Parties	Norway, Sweden, Finland	
Other responsible authorities	Arctic Council – especially CAFF Working group NEAFC Governments in wintering range of subspecies, particularly Uganda, Kenya, and Tanzania, and authorities in neighbouring areas of Russia (Murman, Kola Peninsula)	
Already protected? Measures adequate?	Birds Directive Annex II (*Larus fuscus,* not this subspecies) AEWA Annex II (as *Larus fuscus* not this subspecies) *L.f.fuscus* listed in Red Data books of Finland, Sweden, Norway, Estonia and Russian Karelia	No known measures specifically taken to protect this subspecies, other than monitoring in Norway, Finland, Sweden and Denmark, and indirect measures to control game bird predators

Brief summary of the proposed monitoring system

Until more is known about the reasons for the decline in populations of *L.f.fuscus* and the possible link with food supply it is difficult to suggest any specific management measures. Consequently, research and monitoring should be seen as a priority for this subspecies within the OSPAR area. There is great need for expanding the monitoring of this subspecies into the northern part of its range and to include demographic parameters that might explain the status of the subspecies. OSPAR could play an important role in helping to design, promote and coordinate and implement the collection of information on the numbers, distribution and activities of *L.f.fuscus* and identification and control of the key threats. Relevant Contracting Parties (Norway, Sweden, Finland, and Denmark), should be tasked to report to OSPAR on:

- annual monitoring, including data on breeding numbers and productivity at known breeding colonies;
- establishment of ringing scheme for chicks at selected colonies;

- annual monitoring of predation (*e.g*. yellow legged gulls, *L.cachinans*) at selected colonies, and population and breeding success of *L.f.intermedius* where it occurs together with *L.f.fuscus*;
- further data collection at the colonies where resources allow, covering diet, feeding ecology, chick provisioning rates, chick survival and growth rates, and chemical contamination (*e.g.* DDE).

In addition, OSPAR should seek to encourage a monitoring programme for birds wintering in East Africa. A monitoring programme would be best organised through the development of a specific OSPAR monitoring plan for *L.f.fuscus.*

Annex 1: Overview of data and information provided by Contracting Parties

Contracting Party	**Feature occurs in CP's Maritime Area***	**OSPAR nominated Contact Point (in bold)** **Or other contributor**	**Contribution made to the assessment (e.g. data/ information provided, national reports, references or weblinks)**
Belgium	?		
Denmark	Yes	**Ib Krag Petersen** ikp@dmu.dk Thomas Bregnballe (NERI) tb@dmu.dk and Morten Joergensen (VITAVIA) mortenmojo@hotmail.com	**Provided relevant contacts** Information on regional protection, breeding population, trends and breeding success of L.f.fuscus in western Baltic provided.
European Commission			
Finland	Yes	Teemu Lehtiniemi, (BirdLife Finland) teemu.lehtiniemi@birdlife.fi and Peter Adriaens (Dutch Birding) adriaens@dutchbirding.nl	Information on breeding population, distribution, success, legal protection, and conservation measures provided.
France	?		
Germany	?		
Iceland	?		
Ireland	?		
Netherlands	?		
Norway	Yes	Tomas Aarvak, Norwegian Ornithological Society tomas@birdlife.no	Copies of key references with information on population, distribution, threats, and recommendations for action provided Anker-Nilssen, T., Bakke, V., Strøm, H., Golovkin, A.N., Bianki, V.V. & Tatarinkova, I.P. 2000 The status of marine birds breeding in the Barents Sea region. Norwegian Polar Institute Report. No. 113. 213 pp. Barrett, R.T., Lorensten, S-H., and Anker-Nilssen, T. (2006). The status of breeding seabirds in Mainland Norway. Atlantic Seabirds 8(3): 97-126. Anker-Nilssen, T., Barrett, R.T., Bustnes, J.O., Erikstad, K.E., Fauchald, P., Lorentsen, S.-H., Steen, H., Strøm, H., Systad, G.H. & Tveraa, T. (2006). SEAPOP studies in the Lofoten and Barents Sea area in 2005. NINA Report 127, 38 pp.

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Portugal	?		
Spain	?		
Sweden	Yes	**Ake Lindström, Zoological Institute, University of Lund** ake.lindstrom@zooekol.lu.se	Information provided via Martin Green martin.green@zooekol.lu.se Axbrink, M. (2007) Silltruten in Sverige – resultat från riksinventeringen 2006 in: Fågelåret 2006 (SOF: Stockholm) Tjernberg, M. and Svensson, M. (eds) (2007). Artfakta – Rödlistade vertebrater I Sverige. [Swedish Red data Book of Vertebrates]. Ardatabanken, SLU, Uppsala.
UK	?		

***** - Information from BirdLife International (2008); '?' signifies occurrence information not available from BirdLife International's database.

Summaries of country-specific information provided

Norway. *L.f.fuscus* breeds in scattered colonies along the Norwegian coast (around 1000 pairs)[12]. Sea surveys in the Barents Sea and Norwegian Sea undertaken as part of the SEAPOP programme in 2005 and 2006 revealed densities of *L.fuscus* of 0.068 birds/km^2 in spring and summer 2005, 0 birds/km^2 in autumn 2005, 0.130 birds/ km^2 in spring and summer 2006, and 0.008 birds/ km^2 in autumn 2006 (Anker-Nilssen *et al*. 2007).

Denmark. The subspecies is known to breed at 3 localities in Denmark (Thomas Bregnballe *in litt* 2008), all outside the OSPAR area: the island of Saltholm, Øresund (<15 pairs estimated in 1999); the island of Bornholm, South-east Denmark (3 - 5 pairs in recent years); and the islands of Ertholmene (*i.e.* Christiansø and Græsholmen), north-east of Bornholm (3 - 5 pairs in recent years, but no chicks have fledged since 1997). Most of the eggs do not hatch, for reasons unknown although some are likely to be taken due to *L.argentatus* predation. It has been suggested that being larger and stronger than *L.f.fuscus, L.f.intermedius* does better against *L.argentatus* at Saltholm, which has led to an increase in the numbers of *intermedius* and decline in *fuscus* (Thomas Bregnballe *in litt* 2008). Counts of breeding pairs of *L.fuscus* (both *fuscus* and *intermedius* subspecies) at Saltholm have been made since 1993 by Morten Joergensen: 80 (1993), 134 (1994), 83 - 98 (1995), 85 (1996), 120 (1997), 140 (1998), 146 (1999), max 86 (2000), 137 (2001), 158 (2002), 170 (2003), 156 (2004), 237 (2005), 204 (2006). There was no real count in 2007 but indications of a decline to pre-2005 numbers (Thomas Bregnballe *in litt* 2008; Morten Joergensen *in litt.* 2008).

Finland. *L.f.fuscus* breeds throughout Southern and central Finland but is a rare breeder in the north. Many pairs breed alone, but most of the population breeds in small colonies (Teemu Lehtiniemi *in litt.* 2008).

[12] The *intermedius* subspecies breeds further south and in much larger numbers (c. 50 000 pairs) with 80% breeding in Skagerrak.

Annex 2: References

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OSPAR COMMISSION

New Court
48 Carey Street
London WC2A 2JQ
United Kingdom

t: +44 (0)20 7430 5200
f: +44 (0)20 7430 5225
e: secretariat@ospar.org
www.ospar.org

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