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HELCOM Red List Species Information Sheets (SIS)
Birds

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Baltic Marine Environment Protection Commission

SPECIES INFORMATION SHEET *Gelochelidon nilotica*

English name: **Gull-billed tern**	Scientific name: ***Gelochelidon nilotica***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Sternidae	Species authority: Gmelin, 1789	
Subspecies, Variations, Synonyms: –	Generation length: 9 years	
Past and current threats (Habitats Directive article 17 code): Changes in agricultural management (A02), Alien species (I01), Competition and predation (I02)	Future threats (Habitats Directive article 17 codes): Tourism (G01), Alien species (I01), Competition and predation (I02), Unknown (U)	
IUCN Criteria: –	**HELCOM Red List Category:**	**RE Regionally Extinct**
Global / European IUCN Red List Category (BirdLife International 2004) LC / VU (A2b)	Annex I EU Birds Directive-yes Annex II EU Birds Directive-no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: CR, Estonia: NA, Finland: –, Germany: 1 (Critically endangered), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: –		

Range description and general trends

The main breeding area of the gull-billed tern is South- and South-East Europe. In North-Western Europe, there is only a small breeding population at the German and Danish North Sea coast. During the 20th century, this "cimbric" population has moved its range towards the south, *i.e.* from the Danish towards the German coasts. The population has been declining from 400–500 bp around 1950 to 20–60 bp currently (Berndt *et al.* 2002; Mauscherning *et al.* 2011). In Denmark, it has become an irregular breeder during the last years (2 bp in 2005, 1 bp in 2009–2011, Nyegaard & Grell 2006; Nyegaard & Willemoes 2010; Eskildsen & Vikstrøm 2011). At the German North Sea coast, the population has been fluctuating between 19 and 61 breeding pairs between 2001 and 2010 (Mauscherning *et al.* 2011).

Gelochelidon nilotica. Photos by Erich Hoyer (left) and Martin Grimm (right).

SPECIES INFORMATION SHEET *Gelochelidon nilotica*

Distribution and status in the Baltic Sea region

At the **German** Baltic coast, the gull-billed tern has been a rare breeding bird in the lagoon areas west of Rügen during the first half of the 19th century. There are breeding records documented for the island Liebes during the years 1818–1839. The species bred only with few pairs and obviously not in all years. Many of the breeding birds have been shot and clutches collected for scientific collections (Brehm & Schilling 1822). In 1880, the gull-billed tern bred again at the German Baltic coast, this time at the southern spit of the island Hiddensee. However, this clutch also has been destroyed (Koske 1919).

In **Denmark**, before 1970 gull-billed terns regularly bred in 5 to 7 colonies in the Limfjord area, 3 to 4 colonies on the island of Læsø and surrounding islets, and one colony in Mariager Fjord. During the 1970s, the species declined markedly. The last known breeding in the Baltic took place on Læsø in 1982 (Møller 1975, Rasmussen & Fischer 1997).

During the last 10 years one or two stray pairs have been seen now and then near some of the old Baltic breeding sites, and breeding has been suspected in a few cases. However, although likely, breeding was never substantiated.

Habitat and ecology

The species breeds in colonies on lakes, marshes and at the coast. The “cimbric” population prefers coastal breeding sites, such as islands or dyke forelands, close to fresh or brackish water surfaces. The former breeding sites in the Baltic Sea area have been small islands with low grass vegetation. The gull-billed tern feeds on insects taken in flight, and also often hunts over wetlands to take earthworms and insects, but also amphibians, small mammals and birds. The wintering areas are situated in tropical Africa.

Description of major threats

Reasons for the decline and range shifts of the “cimbric” population are probably losses and degeneration of feeding habitats due to the intensification of agricultural management. Reduction of food availability due to pesticide application is claimed as an impact factor for both breeding and wintering areas. There are also indications that elevated mortality due to accumulation of toxic substances may play a role. Disturbances and predation (especially by Foxes and other predatory mammals) could lead to abandonment of breeding sites. Climate and weather phenomena (wet or extremely hot periods during the breeding season, flood events) can (with increasing trend?) affect the reproduction success (Hälterlein 1998).

Assessment justification

Since there haven’t been breeding records in the Baltic Sea area for almost 30 years, the species is classified as *Regionally Extinct* (RE).

Recommendations for actions to conserve the species

The north-western European (“cimbric”) population has disappeared from the Baltic and strongly declined in the core areas in the Wadden Sea, where it is at the verge of extinction. The remaining population numbers are low (less than 50 bp in recent years) and the reproduction success is poor. There are no signs of the recovery of the population; a re-colonization of the Baltic Sea area cannot be expected. Hence, conservation actions for the species have to focus on the breeding sites in the Wadden Sea; for the Baltic Sea area, they are not meaningful.

SPECIES INFORMATION SHEET *Gelochelidon nilotica*

Common names

Denmark: Sandterne, Estonia: Naerutiir, Finland: Hietatiira, Germany: Lachseeschwalbe, Latvia: Kāpu zīriņš, Lithuania: kirasnapė žuvėdra, Poland: rybitwa krótkodzioba, Russia: Чайконосая крачка, Sweden: Sandtärna

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SPECIES INFORMATION SHEET *Charadrius alexandrinus*

English name: **Kentish plover**	Scientific name: ***Charadrius alexandrinus***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Charadriidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 code): Tourism (G01), Alien species (I01), Competition and predation (I02), Unknown (U)	Future threats (Habitats Directive article 17 codes): Tourism (G01), Alien species (I01), Competition and predation (I02), Unknown (U)	
IUCN Criteria: **D1**	**HELCOM Red List Category:**	**CR Critically Endangered**
Global / European IUCN Red List Category (BirdLife International 2004): LC / LC	Annex I EU Birds Directive yes Annex II EU Birds Directive no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: EN, Estonia: NA, Finland: –, Germany: 1 (Critically endangered), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: RE		

Range description and general trends

The Kentish plover is a widespread breeder in the coastal areas of western and southern Europe. The north-western European population is small and amounts not more than 1 300 bp. It has been declining for several decades (Berndt *et al.* 2002, Thorup 2006). At the Wadden Sea coast of Schleswig-Holstein, the Kentish plover has been declining from 600 bp in 1993 to 200 bp in 1999 (Berndt *et al.* 2002). In the Danish Wadden Sea – in particular on the beaches of the islands Fanø and Rømø – the population has fluctuated without a clear trend since the first countrywide survey in 1969 (Dybbro 1970); the breeding pair numbers were 36–120 during the period 1998–2010 (Nyegaard & Grell 2005–2009, Nyegaard & Willemoes 2010, Thorup & Laursen 2010).

Charadrius alexandrinus. Photo by Christoph Moning.

The range of the north-western European population covers the western Baltic, where the numbers of breeding pairs probably always have been rather low. However, in the 20th century the Baltic Sea breeding population declined further and after 2000 only a few breeding attempts have been recorded in the HELCOM area.

Distribution and status in the Baltic Sea region

In **Sweden**, during the 20th century the Kentish plover was breeding in low numbers on different sites of the west coast (Skälderviken, Halmstad, Landskrona), but also on Öland (1947–1949). During the 1990s, south-west Scania was the main breeding area with 2–4 bp between 1996 and 1999 and 1 bp in 2000–

2001. In 2004 a breeding attempt was recorded in the southwest part of Scania and the two following years (2005 and 2006) saw successful breeding. There have also been breeding attempts in 1992 and 1997 in Halland (Swedish west coast). On Öland, one pair bred successfully in 2008 and 2011; in 2010 a breeding attempt was recorded (ArtDatabanken 2010).

For **Poland**, one single breeding record has been reported in 1992 from the Vistula mouth (Tomiałojć & Stawarczyk 2003).

In **Germany**, the species disappeared from the Baltic coast of Schleswig-Holstein already around 1930. In Mecklenburg-Western Pomerania it was a rare breeding bird. The last more or less stable breeding site were the Werder Islands between Hiddensee and Zingst peninsula, where breeding has been recorded until the mid-1920s (Robien 1928). During the second half of the 20th century only a few breeding attempts have been recorded: 1975 and 1979 on the sandy spit Bessin (island Hiddensee, Stübs 1987), and from 2000–2003 on sandy banks of the Bock region south of Hiddensee with the following records: 2000 – 2 pairs with territorial behaviour; 2001 – 2 clutches found; 2003 – 1 clutch found (Eichstädt 2006).

In **Denmark**, a countrywide survey of Kentish plover was performed in 1969 (Dybbro 1970). Additional data were collected during the first Danish Atlas 1971–1974 (Dybbro 1976), and most (former) breeding sites in the Danish Baltic were surveyed 1993–1996 (Grell 1998). A Wadden Sea programme surveys the entire Wadden Sea population annually since 1996 (Thorup 2010 and unpublished).

In 1969, 48 pairs were found in the Baltic Denmark on sandy beaches in northeast Jylland, Læsø and around Sjælland. Dybbro (1976) describes a rapid decline during the period 1955–1975 in all regions of Denmark except the Wadden Sea. The last breeding in the Baltic took apparently place in the late 1970s or early 1980s. Since the mid-1990s the only area with breeding Kentish plovers in Denmark is the Wadden Sea.

SPECIES INFORMATION SHEET *Charadrius alexandrinus*

Distribution map

SPECIES INFORMATION SHEET *Charadrius alexandrinus*

Habitat and ecology

The species breeds on sandy coasts and brackish inland lakes on sites with sparse vegetation. It nests in a ground scrape and lays three to four eggs.

Description of major threats

The main reason for the decline is the increase of disturbances of the breeding sites by visitors. Visitors prevent that Kentish plovers can use their anti-predator strategies, *e.g.* by choosing different breeding sites from year to year and to establish territories and nests furthest away from areas frequently visited by mammalian predators.

Assessment justification

The Kentish plover has bred regularly in the Baltic Sea area in former times, but after a long-term decline it has become a very rare breeder during the last decade. There have been no breeding records in 2002, 2007, 2009; however, it is assumed that the species still breeds regularly with 1-2 breeding pairs. It classifies as *Critically Endangered (*CR) according to the criterion D1.

Recommendations for actions to conserve the species

Since the disappearance of the Kentish plover from the Baltic Sea area is obviously related to the population and range decline of the north-western European population, special conservation measures in the Baltic Sea area are not very promising. The focus has to be put on the conservation of the population in its core area, *i.e.* the North Sea. However, suitable breeding habitats in the Baltic Sea area, especially on those sites where the species has bred during the last decade, should be conserved.

Common names

Denmark: Hvidbrystet præstekrave, Estonia: Mustjalg-tüll, Finland: Mustajalkatylli, Germany: Seeregenpfeifer, Latvia: Jūras tārtiņš, Lithuania: Juodakojis kirlikas, Poland: Sieweczka morska, Russia: Морcкой зуёк, Sweden: Svartbent strandpipare

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SPECIES INFORMATION SHEET — *Gavia arctica* (wintering)

English name: **Black-throated diver**	Scientific name: ***Gavia arctica* (wintering population)**	
Taxonomical group: Class: Aves Order: Gaviiformes Family: Gaviidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: *Gavia arctica arctica;* black-throated loon	Generation length: 10 years	
Past and current threats (Habitats Directive article 17 code): Breeding: Contaminant pollution (H04.01, H04.02), Eutrophication (H01.05), Other threat factors (Loss of specific habitat features, J03.01), Human disturbance (G01), Alien species (I01) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Contaminant pollution (H04.01, H04.02), Eutrophication (H01.05), Other threat factors (Loss of specific habitat features, J03.01), Human disturbance (G01), Alien species (I01) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Construction (C03.03, D03.03), Water traffic (D03.02	
IUCN Criteria: **A2b**	**HELCOM Red List Category:**	**CR Critically Endangered**
Global / European IUCN Red List Category (BirdLife International 2004): LC / VU	Annex I EU Birds Directive yes	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I) and in Russia (Red Data Book of the Russian Federation)* Denmark: –, Estonia: CR, Finland: LC (listed as "Threatened Species" in the Nature Conservation Decree Annex 4), Germany: "particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: E (Endangered), Poland: EX, Russia: 2 (declining population), Sweden: LC		

Range description and general trends

The black-throated diver has a northern Holarctic breeding distribution and occurs mainly in the boreal and arctic zones from NW Europe through NE Siberia to NW Alaska. The species breeds in tundra and on arctic islands as well as in the Asian steppe zone. The subspecies *Gavia arctica arctica* occurs from NW Europe to W Siberia and winters along the coasts of NW Europe, the Mediterranean, the Black Sea and the Caspian Sea. Besides, the black-throated diver also winters on large lakes in Europe and Asia (Hagemeijer & Blair 1997, Mendel et al. 2008). The N Europe/W Siberia winter population was estimated at 250 000 to 500 000 birds (Wetlands International 2012).

Distribution and status in the Baltic Sea region

Since the identification of the two diver species at sea is rather difficult, Red-throated and black-throated divers were treated together in the two comprehensive surveys 1988–1993 and 2007–2009. Thus, the distribution and phenology of the two species in the Baltic Sea is only partly known. Both species begin to arrive in the Baltic Sea in September and gradually increase in numbers during the following month. Some divers rest in the Baltic for only a few weeks before moving on to other wintering areas and returning to the Baltic from January onwards. Between mid-April and mid-May divers leave the Baltic Sea (Skov et al. 2011). At the beginning of the 1990s, the Irbe Strait and the Gulf of Riga were the most important wintering areas of divers. Other important areas were the shallow waters off the coast of Lithuania, the Pomeranian Bay, NW Kattegat, Smålandsfarvandet and off the

central Polish coast. The majority of birds wintering north of the Kursiu Lagoon as well as in Smålandsfarvandet were red-throated divers, while black-throated divers dominated in the central parts of the Baltic Sea, in the area from the coast of Poland to north of Öland and west of Rügen. In Danish waters (except Smålandsfarvandet) the divers seemed to winter in equal numbers (Durinck et al. 1994). The more recent Baltic survey revealed that the number of divers wintering in the Baltic Sea decreased by 86 %. Numbers dramatically declined in the Irbe Strait and Gulf of Riga, while the largest concentrations of divers were found from the Irbe Strait southwards along the coasts of Lithuania, Latvia and southern Estonia as well as in the Pomeranian Bay (Skov et al. 2001; Fig. 1). Despite significantly smaller numbers, the overall distribution patterns in the Baltic Sea have not changed. The highest densities were still found in a narrow band along the mainland coast north of Rügen up to the Gulf of Riga. In this concentration area the vast majority of identified divers were red-throated divers, while south of this areas the proportion of black-throated divers appeared to be higher (Skov et al. 2011). Based on the provided information of the distribution of both species, the total number of 56 665 divers given by Durinck et al. (1994) could be assigned to 43 713 (77%) Red-throated and 12 952 (23%) black-throated divers wintering in the Baltic Sea in the early 1990s, while the total number of 8.575 observed in the period 2007–2009 could be assigned to 6297 (73%) Red-throated and 2278 (27%) black-throated divers, indicating similar proportions of both species compared to the early 1990s. Based on these figures, the total number of black-throated divers wintering in the Baltic Sea has declined from c. 13 000 birds in 1988–1993 to 2 300 birds in 2007–2009, equivalent to 82% over 16 years.

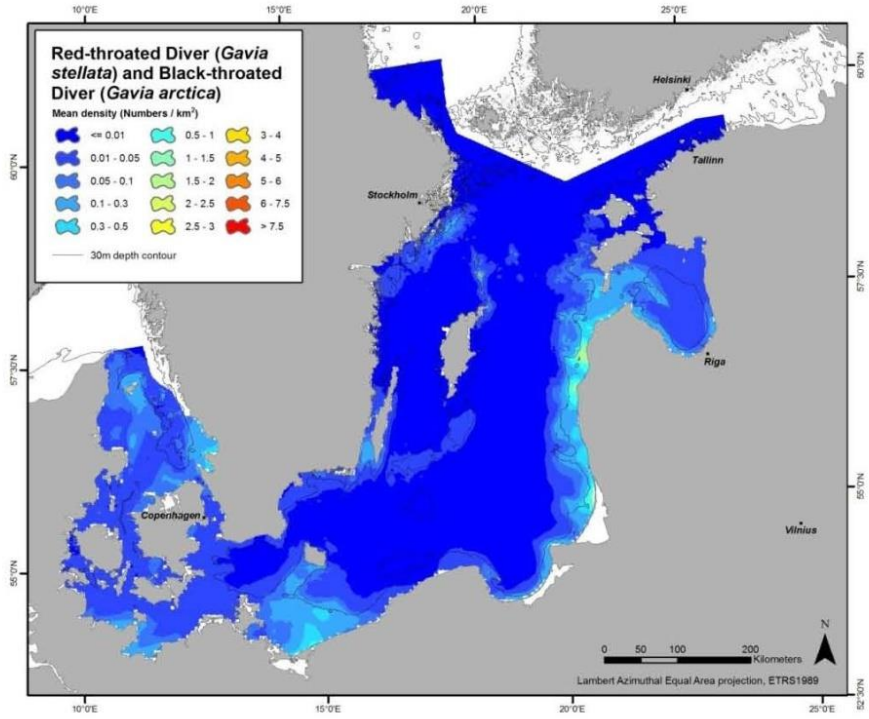

Fig. 1. Distribution and density of wintering divers (red-throated diver *Gavia stellata* and black-throated diver *Gavia arctica*) in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and ecology

During the non-breeding season, black-throated divers are predominantly found at sea, but may also occur on inland lakes (Mendel et al. 2008). In the German Bight in the North Sea, the species apparently favours sea areas with turbid, moderately saline water, with greatest bird densities occurring along frontal systems (Skov & Prins 2001). In the Baltic Sea, most divers winter offshore in areas of 5 to 30 m

water depths, often far at sea. Some birds are even found in waters up to 100 m depth (Durinck et al. 1994, Skov et al. 2011). In winter, black-throated divers feed preferably on fish up to 25 cm and are assumed to be opportunistic feeders. In the Baltic Sea, small (swarming) fishes such as gobies, vimba, European smelt, percids and sticklebacks are important prey species (Žydelis 2002, Mendel et al. 2008).

Description of major threats

Beside threat factors in the breeding areas, like **acidification**, **eutrophication** and **degradation** of **breeding habitats, heavy metal pollution** and **disturbances** near the nesting sites (Bauer et al. 2005, del Hoyo et al. 1992), various pressures in the wintering areas were identified that have possibly contributed to the observed declines in the Baltic Sea winter population:

Intense **gillnet fisheries** in the Baltic Sea impose a high risk of **entanglement** and **drowning** for diving bird species. The fisheries often overlap with resting and feeding areas of black-throated divers (FTZ unpubl. data). According to Žydelis et al. (2009), hundreds of divers are annually caught in gillnets in the Baltic Sea, especially in Sweden, Latvia, Lithuania, Poland and Germany. Black-throated divers usually spend large portions of time swimming on the water and sometimes occur locally in dense concentrations. Thus, they are highly vulnerable to **oil pollution**. Oiling has been identified as one of the most important threats to seabirds and waterbirds in several Baltic Sea countries (e.g. Žydelis & Dagys 1997). According to Bauer et al. (2005), black-throated divers suffer from high losses due to oiling in wintering areas. Black-throated divers have a very large disturbance distance with regard to vessels and usually take flight when a ship is approaching (Garthe et al. 2004). Thus they are very sensitive to **disturbance by ship traffic.** This pronounced sensitivity to shipping movements may entail the birds to avoid busy shipping lanes and thus influence the distribution of black-throated divers, as has been documented for red-throated divers in the North Sea (Hüppop et al. 1994, Schwemmer et al. 2011). Even in less sailed areas, ship traffic may cause fragmentation and loss of suitable feeding and resting habitats for black-throated divers. Black-throated divers migrate in low flight altitudes, have only poor flight manoeuvrability and are supposed to frequently move between different feeding and resting sites. Hence, they are particularly at risk of colliding with **offshore wind turbines and other obstacles.** The species is ranked highest in the wind farm sensitivity index and is thus recognized as highly vulnerable (Garthe & Hüppop 2004). The disturbance or displacement effect of offshore wind farms can lead to large-scale losses of suitable habitats, as has been documented for the red-throated diver in the North Sea (Dierschke et al. 2006). Migrating black-throated divers were found to deviate around the wind turbines of a wind farm in the Swedish Baltic Sea (see Dierschke & Garthe 2006).

Assessment justification

Based on the information of the distribution of both diver species provided by Durinck et al. (1994) and Skov et al. (2011), the number of black-throated divers wintering in the Baltic Sea dramatically decreased from c. 13 000 birds in 1988–1993 to 2,300 birds in 2007–2009, equivalent to a decline of 95 % over three generations (1993–2023; 30 years, GL = 10 according to the Swedish Red List, Tjernberg & Svensson 2007). Hence, the species is classified as *Critically Endangered* (CR) according to criterion A2b, as the causes of the reduction are not yet understood and the reduction may not have ceased. Although there might be some inaccuracy in the number of each diver species, the assessment is rather distinct and it would require an extra several thousand black-throated divers to fall below the threshold of CR.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. In the wintering areas, reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options that are likely to support the recovery of this species.

SPECIES INFORMATION SHEET *Gavia arctica* (wintering)

Common names

Denmark: sortstrubet lom, Estonia: järvekaur, Finland: kuikka, Germany: Prachttaucher, Latvia: melnkakla gārgale, Lithuania: juodakaklis naras, Poland: nur czarnoszyi, Russia: Чернозобая гагара, Sweden: storlom

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SPECIES INFORMATION SHEET *Gavia stellata* (wintering)

English name: **Red-throated diver**	Scientific name: ***Gavia stellata* (wintering population)**	
Taxonomical group: Class: Aves Order: Gaviiformes Family: Gaviidae	Species authority: Pontoppidan, 1763	
Subspecies, Variations, Synonyms: red-throated loon	Generation length: 9 years	
Past and current threats (Habitats Directive article 17 code): Breeding: Contaminant pollution (H04.01, H04.02), Eutrophication (H01.05), Other threat factors (Loss of specific habitat features, J03.01), Human disturbance (G01) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Contaminant pollution (H04.01, H04.02), Eutrophication (H01.05), Other threat factors (Loss of specific habitat features, J03.01), Human disturbance (G01) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria: **A2b**	**HELCOM Red List Category:**	**CR Critically Endangered**
Global / European IUCN Red List Category (BirdLife International 2004): LC / LC	Annex I EU Birds Directive yes	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: – (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: RE, Finland: NT (listed as "Threatened Species" in the Nature Conservation Decree Annex 4), Germany: "particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT		

Range description and general trends

The red-throated diver has a circumpolar and Holarctic distribution, occurring throughout the Arctic and in large parts of the boreal zone of Eurasia and North America. It mainly inhabits treeless tundra and heath terrain near oceanic coasts and also breeds over much of the boreal coniferous forest zone. West Palearctic birds mostly move to the North Sea and Baltic Sea for wintering, as well as to the Atlantic coast of Norway, UK and France southwards to the Bay of Biscay. In severe winters, the species may even reach the northern Mediterranean coast. Occasionally, wintering birds are recorded on inland lakes (Hagemeijer & Blair 1997, Mendel et al. 2008). Birds breeding in Arctic Central Eurasia winter in the Caspian and Black Sea and in the eastern Mediterranean. The NW European winter population was estimated at 150 000 to 450 000 birds (Wetlands International 2012).

SPECIES INFORMATION SHEET *Gavia stellata* (wintering)

*Gavia stellata.*Photo by Jana Kotzerka

Distribution and status in the Baltic Sea region

Since the identification of the two diver species at sea is rather difficult, red-throated and black-throated divers were treated together in the two comprehensive surveys 1988–1993 and 2007–2009. Thus, the distribution and phenology of the two species in the Baltic Sea is only partly known. Both species begin to arrive in the Baltic Sea in September and gradually increase in numbers during the following month. Some divers rest in the Baltic for only a few weeks before moving on to other wintering areas and returning to the Baltic from January onwards. Between mid-April and mid-May divers leave the Baltic Sea (Skov et al. 2011). At the beginning of the 1990s, the Irbe Strait and the Gulf of Riga were the most important wintering areas of divers. Other important areas were the shallow waters off the coast of Lithuania, the Pomeranian Bay, NW Kattegat, Smålandsfarvandet and off the central Polish coast. The majority of birds wintering north of the Kursiu Lagoon as well as in Smålandsfarvandet were red-throated divers, while black-throated divers dominated in the central parts of the Baltic Sea, in the area from the coast of Poland to north of Öland and west of Rügen. In Danish waters (except Smålandsfarvandet) the divers seemed to winter in equal numbers (Durinck et al. 1994). The more recent Baltic survey revealed that the number of divers wintering in the Baltic Sea decreased by 86 %. Numbers dramatically declined in the Irbe Strait and Gulf of Riga, while the largest concentrations of divers were found from the Irbe Strait southwards along the coasts of Lithuania, Latvia and southern Estonia as well as in the Pomeranian Bay (Skov et al. 2001; **Error! Reference source not found.**). Despite significantly smaller numbers, the overall distribution patterns in the Baltic Sea have not changed. The highest densities were still found in a narrow band along the mainland coast north of Rügen up to the Gulf of Riga. In this concentration area the vast majority of identified divers were red-throated divers, while south of this areas the proportion of black-throated divers appeared to be higher (Skov et al. 2011). Based on the provided information of the distribution of both species, the total number of 56 665 divers given by Durinck et al. (1994) could be assigned to 43 713 (77%) Red-throated and 12 952 (23%) black-throated divers wintering in the Baltic Sea in the early 1990s, while the total number of 8 575 observed in the period 2007–2009 could be assigned to 6297 (73%) Red-throated and 2278 (27%) black-throated divers, indicating similar proportions of both species compared to the early 1990s. Based on these figures, the total number of red-throated divers wintering in the Baltic Sea has declined from c. 44 000 birds in 1988–1993 to 6 300 birds in 2007–2009, equivalent to 86% over 16 years.

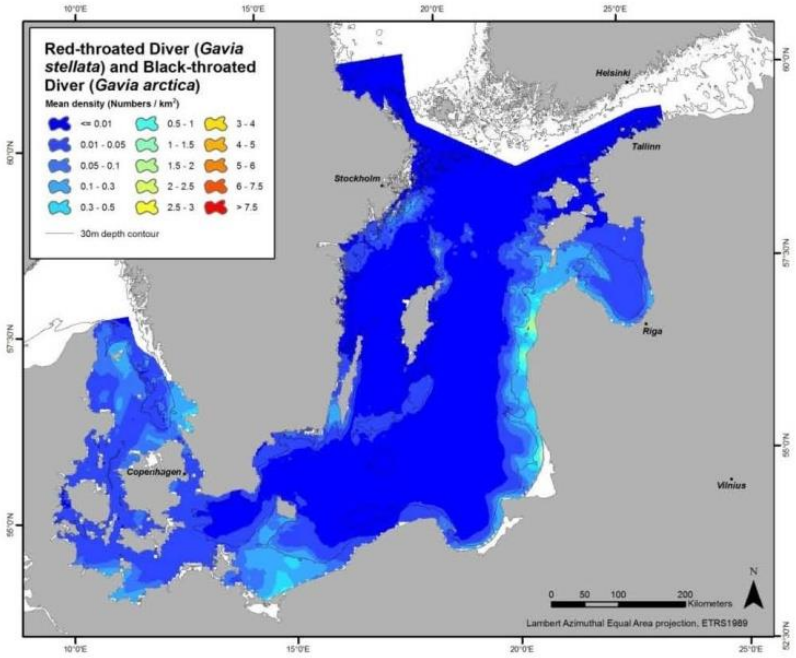

Fig. 2. Distribution and density of wintering divers (red-throated diver *Gavia stellata* and black-throated diver *Gavia arctica*) in the Baltic Sea, 2007–2009. Taken from Skov et al. (2011).

Habitat and ecology

During the non-breeding season, red-throated divers are predominantly found at sea. Besides, they may also be found inland on slow-flowing rivers, on lakes, fish ponds and reservoirs (Mendel et al. 2008). In the German Bight in the North Sea, the species apparently favours sea areas in the vicinity of frontal systems (Skov & Prins 2001). In the Baltic Sea, most divers winter offshore in areas of 5 to 30 m water depths, often far at sea. Some birds are even found in waters up to 100 m depth (Durinck et al. 1994, Skov et al. 2011). In winter, red-throated divers feed almost entirely on fish and are assumed to be opportunistic feeders. In the Baltic Sea, benthopelagic (swarming) fishes such as Herring, Smelt and Percids are important prey species (Žydelis 2002, Guse et al. 2009).

Description of major threats

Beside threat factors in the breeding areas, like **acidification**, **eutrophication** and **degradation** of **breeding habitats, heavy metal pollution** and **disturbances** near the nesting sites (Bauer et al. 2005, del Hoyo et al. 1992), various pressures in the wintering areas were identified that have possibly contributed to the observed declines in the Baltic Sea winter population:

Intense **gillnet fisheries** in the Baltic Sea impose a high risk of **entanglement** and **drowning** for diving bird species. The fisheries often overlap with resting and feeding areas of red-throated divers (e.g. Guse et al. 2009). According to Žydelis et al. (2009), hundreds of divers are caught annually in gillnets in the Baltic Sea, especially in Sweden, Latvia, Lithuania, Poland and Germany. In a small area of the German Baltic Sea, Schirmeister (2003) recorded 370 drowned red-throated divers over a 12 winter period. Red-throated divers usually spend large portions of time swimming on the water and sometimes occur locally in dense concentrations. Thus, they are highly vulnerable to **oil pollution**. Oiling has been identified as one of the most important threats to seabirds and waterbirds in several Baltic Sea countries (e.g. Žydelis & Dagys 1997). During beached-birds surveys along the German North Sea coast in winter 2001/2001, red-throated divers exhibited with 84 % the highest rate of oiled birds recorded (Fleet et al. 2003). Red-throated divers have a very large disturbance distance with regard to vessels and usually

take flight when a ship is approaching (Garthe et al. 2004, Schwemmer et al. 2011). Thus they are very sensitive to **disturbance by ship traffic.** Measurements in the North Sea revealed flight distances of red-throated divers up to 2 km in front of the observation vessel, with a median value of 400 m (Bellebaum et al. 2006). This pronounced sensitivity to shipping movements may cause the birds to avoid busy shipping lanes and thus influence the distribution of red-throated divers, as has been documented for the North Sea (Hüppop et al. 1994; Schwemmer et al. 2011). Even in less frequently sailed areas, ship traffic may cause fragmentation and loss of suitable feeding and resting habitats. According to Schwemmer et al. (2001), habituation to passing ships is unlikely to occur in red-throated divers. Red-throated divers migrate in low flight altitudes, have only poor flight manoeuvrability and are supposed to frequently move between different feeding and resting sites. Hence, they are particularly at risk of colliding with **offshore wind turbines and other obstacles**. The species is ranked second to the black-throated diver in the wind farm sensitivity index and is thus recognized as highly vulnerable (Garthe & Hüppop 2004). The disturbance or displacement effect of offshore wind farms can lead to large-scale losses of habitats suitable for red-throated divers, as has been documented for the North Sea (Dierschke et al. 2006). Collisions of the species with wind turbines have also been documented (see Dierschke & Garthe 2006). At the wind farm in Horns Rev in the Danish North Sea, red-throated divers were observed to avoid the installations at distances up to 4 km (Petersen et al. 2004). Even more than five years after construction, red-throated divers did not habituate to wind farms in the Danish North and Baltic Sea (Petersen & Fox 2007, Petersen et al. 2008).

Assessment justification

Based on the information of the distribution of both diver species provided by Durinck et al. (1994) and Skov et al. (2011), the number of red-throated divers wintering in the Baltic Sea dramatically decreased from c. 44 000 birds in 1988–1993 to 6 300 birds in 2007–2009, equivalent to a decline of 96% over three generations (1993–2020; 27 years, GL = 9 according to the Swedish Red List, Tjernberg & Svensson 2007). Hence, the species is classified as *Critically Endangered* (CR) according to criterion A2b, as the causes of the reduction are not yet understood and the reduction may not have ceased. Although there might be some inaccuracy in the number of each diver species, the assessment is rather distinct and it would require an extra several thousand red-throated divers to fall below the threshold of CR.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. In the wintering areas, reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options that are likely to support the recovery of this species.

Common names

Denmark: rødstrubet lom, Estonia: punakurk-kaur, Finland: kaakkuri, Germany: Sterntaucher, Latvia: brūnkakla gārgale, Lithuania: rudakaklis naras, Poland: nur rdzawoszyi, Russia: Краснозобая гагара, Sweden: smålom

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SPECIES INFORMATION SHEET *Anser fabalis fabalis* (wintering)

English name: **Taiga Bean Goose**	Scientific name: ***Anser fabalis fabalis* (wintering population)**	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Latham, 1787	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Hunting (F03.01), Human disturbance (G01), Overgrowth of open areas (A04.03), Mining and quarrying (C01.03), Construction (J02.12, C02), Other threat factors (Loss of specific habitat features, J03.01), Contaminant pollution (A07), Extra-regional threats (XO)	Future threats (Habitats Directive article 17 codes): Hunting (F03.01), Human disturbance (G01), Overgrowth of open areas (A04.03), Mining and quarrying (C01.03), Construction (J02.12, C02), Other threat factors (Loss of specific habitat features, J03.01), Contaminant pollution (A07), Extra-regional threats (XO)	
IUCN Criteria: **A2b**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex II A	
Protection and Red List status in HELCOM countries: *According to the Birds Directive (Annex II A) may be hunted in the EU Member States.* Denmark: – (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: VU, Finland: NT, Germany:"particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT (breeding/resting)		

Range description and general trends

The taiga bean goose *Anser fabalis fabalis* breeds in apparently two separate breeding populations in the Taiga zone of northern Scandinavia and of NW Siberia. Scandinavian birds mainly winter in S Sweden, with smaller numbers migrating to Denmark, Germany, The Netherlands and Great Britain. During hard winter periods with thick snow cover, the birds leave Sweden and move on to the southwest, formerly to W Germany and The Netherlands but nowadays mainly to Denmark. Birds breeding in NW Siberia mainly migrate to Sweden in October and, after a short stopover, proceed to their wintering areas in E Germany and Poland. Small numbers of the NW Siberian breeding population also winter in Central Asia (Nilsson et al. 1999, Bauer et al. 2005, Heinicke et al. 2005). As geese counts in former years did not differentiate between the two subspecies *fabalis* and *rossicus*, information on population size and long-term trends are rather uncertain. However, the population of the taiga bean goose has been strongly declining since the 1999. In the mid-1990s, the population was estimated at 100 000 birds (Nilsson et al. 1999), but decreased to c. 63 000 birds in 2009 (Fox et al. 2010). Since then, it might have decreased even further. Intensive surveys in January 2010/2011 suggest that the decline between 2004/2005 and 2010/2011 may be as much as 50% (T. Heinicke in litt, cited in Wetlands International 2013). While Wetlands International (2013) gives an estimate of 40 000–45 000 birds for 2011, L. Nilsson (written) assumes a current population size of 45 000–60 000 birds. Declines have also been observed in the breeding areas in Scandinavia in the 1990s (Nilsson et al. 1999), but there are no good data from the breeding areas from recent years (L. Nilsson, written). On the Swedish Red List, both, the breeding and the resting population are listed as Near Threatened (Tjernberg & Svensson 2007). In Finland, the distribution of breeding birds is shrinking, the population trend is probably declining. The species is assessed as Near Threatened on the Finnish Red List (Mikkola-Roos et al. 2010, Valkama et al. 2011).

SPECIES INFORMATION SHEET *Anser fabalis fabalis* (wintering)

Taiga bean geese, *Anser fabalis fabalis*. Pictures by L. Nilsson

Distribution and status in the Baltic Sea region

In the Baltic Sea area, the taiga bean goose winters in Sweden, Denmark, Germany and Poland. Largest concentrations are found along the coast reaching some 50–80 km inland, but in Germany wintering sites are also found inland along river valleys. In Sweden, the majority of the world population of *fabalis* gathers during migration in October. Birds breeding in NW Siberia mainly move on to E Germany and Poland, while large parts of the Scandinavian breeding population remain in S Sweden and only relocate to Denmark in strong winter periods (Nilsson et al. 1999, Heinicke et al. 2005). Accordingly, mid-winter numbers in Sweden show no clear trend, but strongly fluctuate due to snow conditions, varying from more than 40 000 geese in mild winters to almost no birds in strongest winter (http://www.zoo.ekol.lu.se/waterfowl/GooseInv/goose.htm). However, the population of taiga bean goose resting in Sweden declined by 10–19% since the early 1990s (Tjernberg & Svensson 2007, Nilsson 2013). Higher numbers recorded in the years 2007–2009 and in 2011, breaking the decreasing trend, may be due to a recent increase in the number of tundra bean geese staging in Sweden in October (http://www.zoo.ekol.lu.se/waterfowl/GooseInv/goose.htm; L. Nilsson, written). In Denmark, there are major regional differences in the occurrence of the taiga bean goose. In north Jutland birds breeding in northern Scandinavia mainly assemble during autumn and spring migration, moving to or coming from wintering grounds outside the Baltic area. Only in mild winters, these geese remain in Jutland. On the larger Danish islands, bean geese breeding in N Fennoscandia and in W Russia arrive during December in rather varying numbers. Numbers increase during cold weather when birds arrive from S Sweden. When a thick layer of snow covers the wintering areas in Denmark, the geese are forced to move further south. The numbers of bean geese in northwest Jutland is slowly decreasing and the overall numbers are small. On the larger islands the numbers are fluctuating, dependent upon the severity of the winters (Pihl et al. 2006). In winter 2004, 10,683 taiga bean geese were observed in Danish areas, a number comparable to mild winter in earlier years. The majority was found in SE Denmark and a small part in NW (Petersen et al. 2006). In winter 2008, 6,518 taiga bean geese were observed in Denmark, with 2,367 birds wintering on Jutland and the remaining in SE Denmark (Petersen et al. 2010). In the German Baltic area, highest numbers of wintering taiga bean goose occur in the east on the islands of Rügen and Usedom, but some larger flocks can also be found in the western parts. Ring recoveries indicate that the birds predominantly originate from NW Siberian breeding areas (Heinicke et al. 2005). Numbers have been decreasing during the last years (T. Heinicke, pers. com.).

SPECIES INFORMATION SHEET *Anser fabalis fabalis* (wintering)

Habitat and Ecology

The taiga bean goose breeds near lakes, pools, rivers and streams in the high Arctic Taiga forest zone of Scandinavia and Russia. It shows a preference for birch tree forest and dense spruce forest with bogs or mires. The birds usually arrive at the breeding grounds late April or early May, in Russia somewhat later. During winter and on migration, *A. f. fabalis* inhabits marshes, agricultural land, damp steppe grassland as well as flood-lands, rivers and coastal shallows in open country. It mainly feeds in agricultural areas, i.e. on fields with sprouting winter grain and with waste beets, potatoes or other root crops. Besides, the geese need secluded and sheltered lakes or bays for resting during night, preferably not too far from the foraging areas (Pihl et al. 2006, Tjernberg & Svensson 2007, BirdLife International 2013).

Description of major threats

The bean goose is a game species with open hunting season in several EU countries and is shot in Sweden, Denmark, Germany and Poland. In Germany and Poland, the annual goose bag has increased considerably from the 1960s to the 1990s and this high hunting pressure on geese likely had a negative influence on the population of taiga bean goose. Although the annual bag of taiga bean goose is lower than in former times, hunting is still a considerable threat to the small population. Geese grazing on winter crop and other agricultural areas often provoke conflicts. While agricultural damage is probably rather caused by other geese species, shooting of bean geese can also be undertaken to protect certain crops (Nilsson et al. 1999). Taiga bean goose is vulnerable to disturbance near the breeding and roosting areas (Tjernberg & Svensson 2007). Although a number of important roosts along the Baltic Sea are located in protected areas, the geese mainly feed on unprotected agricultural areas subject to shooting or disturbance. Furthermore, intensive shooting can also occur close to protected roosts or even within the borders of nature reserves. Further threats to taiga bean goose are **habitat degradation** or **habitat destruction**, e.g. by water power installations, oil production, peat extraction, dyking, drainage or changes of management practices leading to overgrowth. Besides, pesticides used on agricultural land can lead to poisoning of taiga bean goose (Bauer et al. 2005, BirdLife International 2013).

Assessment justification

The major part of the flyway (world) population of taiga bean goose winters in the Baltic Sea area; the general population trend is thus assumed to be representative of the Baltic winter population trend. Although the assessment of taiga bean goose is complicated by fluctuating numbers due to variation in the severity of the winters as well as by limited differentiation of the two subspecies *fabalis* and *rossicus*, it is concordantly assumed that the population has been strongly declining since the late 1990s. According to Nilsson et al. (1999) and Fox et al. (2010), the population decreased from 100 000 birds estimated for 1997 to c. 63 000 birds in 2009. Since then, it may have further decreased to 40 000–60 000 birds (see above). Taking the numbers presented in Fox et al. (2009) as the basis for the assessment, a decline from 100 000 birds in 1997 to 63 000 birds in 2009 is equivalent to a reduction of 50% over three generations (18 years, according to the Swedish Red List, Tjernberg & Svensson 2007). This grades the taiga bean goose at the threshold of the category *Endangered* (EN) according to criterion A2b, as the reduction and its causes are not fully understood. Considering a possible further decline of the population since 2009, this category seems justified. Accordingly, the taiga bean goose is classified as *Endangered*. As the population size exceeds 20 000 birds and the subspecies has a large range, criteria B, C and D do not apply.

Recommendations for actions to conserve the species

As numbers strongly fluctuate between different wintering sites around the Baltic Sea, coordinated, simultaneous monitoring programs need to be continued, with a special emphasis on the differentiation of the two subspecies, in order to receive more accurate information on population size and trends. Shooting of taiga bean goose needs to be prohibited to avoid mortality, injury or disturbance. As

problems may arise due to confusion with tundra bean goose and other grey goose species, a shooting ban of all goose species in the most important areas for taiga bean goose needs to be considered. Undisturbed breeding and resting sites of taiga bean goose have to be ensured, while loss or damage of such habitats need to be compensated for by appropriate measures. Protection of feeding areas is more difficult, as taiga bean geese often forage in agricultural areas. In Sweden, certain fields in some areas with large concentrations of staging taiga bean geese have been sown with special crops for the geese, often combined with scaring on other fields. These experiments have been yielding some success in solving a possible agricultural conflict and prevent the shooting of the geese (cited in Nilsson et al. 1999).

Common names

Denmark: skovsædgås, taigasædgås, Estonia: rabahani, Finland: metsähanhi, Germany: Wald-Saatgans, Taiga-Saatgans, Latvia: –, Lithuania: želmeninė žąsis, Poland: gęś zbożowa, Russia: Таежный гуменник, Sweden: sädgås

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RE | CR | EN | VU | NT | DD | LC

SPECIES INFORMATION SHEET

Calidris alpina schinzii

English name: **Southern dunlin**	Scientific name: ***Calidris alpina schinzii***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 7 years	
Past and current threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03), Alien species (I01), Competition and predation (I02), Ditching (J02.01.01, J02.05), potentially also Climate change (M) and Extra-regional threats (XE)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03), Alien species (I01), Competition and predation (I02), potentially also Climate change (M) and Extra-regional threats (XE)	
IUCN Criteria: **A2ace, C1**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category (BirdLife International 2004): LC / LC[1]	Annex I EU Birds Directive yes Annex II EU Birds Directive no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I) and in Russia (Red Data Book of the Russian Federation)* Denmark: EN, Estonia: EN (species level), Finland: CR, Germany: 1 (Critically endangered, species level), Latvia: –, Lithuania: 1 (E, Endangered, species level), Poland: EN, Russia: 1 (under threat of extinction), Sweden: CR		

Range description and general trends

The southern sub-species of the dunlin, *Calidris alpina schinzii*, colonises south-eastern Greenland, Iceland, the Faeroe Islands, Great Britain and Ireland, southern Norway, and the Baltic. In the southern North Sea (Belgium, Netherlands and Germany), the dunlin has been a breeding bird in the past, but in recent times breeding records are few and irregular.

Distribution and status in the Baltic Sea region

During the 19th and at the beginning of the 20th century, the dunlin was still a widespread and common bird in most parts of the Baltic (Boie 1822, Fromholz 1913, Thorup 1997). However, already at the end of the 19th /beginning of the 20th century the dunlin has been declining in the southern Baltic (Wüstnei & Clodius 1900), and this decline has continued during the whole 20th century. Since the mid-1990s, the negative trend has even accelerated.

During the 20th century, the **Swedish** population has been declining rapidly. In the south-Swedish province of

Calidris alpina schinzii. Photo by Andrei Frenkel.

[1] Assessment on species level, not for the subspecies *C. a. schinzii*

Scania, the population amounted still 425 pairs in 1930, but dropped down to only 100 pairs in 1994, and 55 in 2004 (Tjernberg & Svensson 2007). The population decline in Sweden reached the magnitude of 50–60% during the period 2000–2010. The total number of breeding pairs in 2010 was estimated at 75–125 bp.

In **Finland**, the southern dunlin has never been numerous. The first documented breedings date back to the 1880s.

In the 1960s, the dunlin was still considered increasing, with a country total of 150–200 bp (Soikkeli 1964; Perttula 1998). New breeding sites were still found in the mid-1980s when the population peaked at 200 pairs. However, until the early 1990s the population had declined to 100 bp. In 1999 the number of confirmed breeding pairs was 71, and in recent years (2003–2009) about constant between 50 and 60 bp.

The only area with a continuous monitoring was in the Pori region (SW Finland), where the breeding pair numbers were 45 in 1947, 14 in 1955, and 60–70 in 1963. After the 1960s the population in this area started to decrease, and until the late 1980s it had dropped down to 26 bp. In the Vaasa region (Kvarken), also many breeding sites have been abandoned in the 1980s and early 1990s. In the northernmost breeding area in the Oulu region the breeding pair numbers still increased until the 1990s. After 2000 some more sites in Finland have been abandoned. The only sites with stable a population or even slight increase are situated in North Ostrobothnia (Oulu region). After 1990s the total number of dunlins in the Oulu region has been unchanged, but the number of breeding sites has decreased.

In the **St Petersburg** region of **Russia** the dunlin is obviously still a rare or sporadic breeder. In 2008, a nest was found on the shore of Kurgalsky peninsula (Fedorov 2009). In 2010, an adult bird with typical breeding behaviour was seen on a small islet near Sescar Island. In the **Kaliningrad** region, the species was known as a breeding bird until 2001 (1989–93: 4–5 bp; 1996–99: 3 pairs; 2001: 2 pairs). After that year, no further breeding could be confirmed (Grishanov & Lykov 2008).

Estonia holds 200–250 pairs, with a decreasing trend prevailing since the 1970s and accelerating since the 1990s (Elts *et al.* 2009).

There are no confirmed breeding records of the dunlin in **Latvia** from recent times. During the elaboration of the second Latvian Breeding Bird Atlas 2000–2004 (in preparation, results are available online: http://www.lob.lv/lv/atlants/sugu_kartes.php?kods=caalp) breeding of dunlins has been suspected for 3 sites: Ainazi and Randu plavas, Teich bog and Daugavgriiva. The population is estimated at 0–7 bp.

The **Lithuanian** population has never been very large; the maximum number reported was 25–30 pairs in 1996–1998 (Thorup 2006). In 2011, the former coastal breeding sites in have been surveyed. No breeding was recorded, and most of the sites were abandoned and overgrown (Thorup *et al.* submitted).

In **Poland**, the population was about 80–100 bp in the mid-1980s, but plummeted down to about 20 bp around 2000 (Tomiałojć & Stawarczyk 2003). Between 1986 and 1993, breeding was confirmed for 3 sites, and suspected for another 8–10 sites. In 1996–1998, the dunlin bred in the delta of the Świna River, at Lake Łebsko, at the mouth of the Reda River and in the Biebrza marshes. After 2000, only 2 breeding sites remained: Świna Delta and Reda River mouth (Sikora *et al*. 2007). In 2007, nine former breeding sites along the sea shore and the Biebrza marshes have been monitored without any breeding record (Sikora *et al.* 2008). However, some birds have been observed in May 2007 in the Świna Delta, and in May 2008 in the Beka Nature Reserve, suggesting that breeding of the species might still be

possible.

In **Mecklenburg-Western Pomerania, Germany**, there are many sources confirming a high abundance of the species in coastal areas at the beginning of the 20th century (*e.g.,* Fromholz 1913). In the mid-1960s the population was still estimated at about 250 bp. Probably as a direct consequence of considerable habitat losses due to land reclamation projects in coastal areas at the end of the 1960s, it declined to about 90–120 bp at the beginning of the 1970s (Nehls 1987). It maintained a level of 70–80 bp until the beginning of the 1990s, but then the population started to decline rapidly and is nowadays with only 7–9 bp close to extinction (Figure 1). However, during the last years (2005–2011) the population remained stable on this low level, but dropped to 4 bp in 2012.

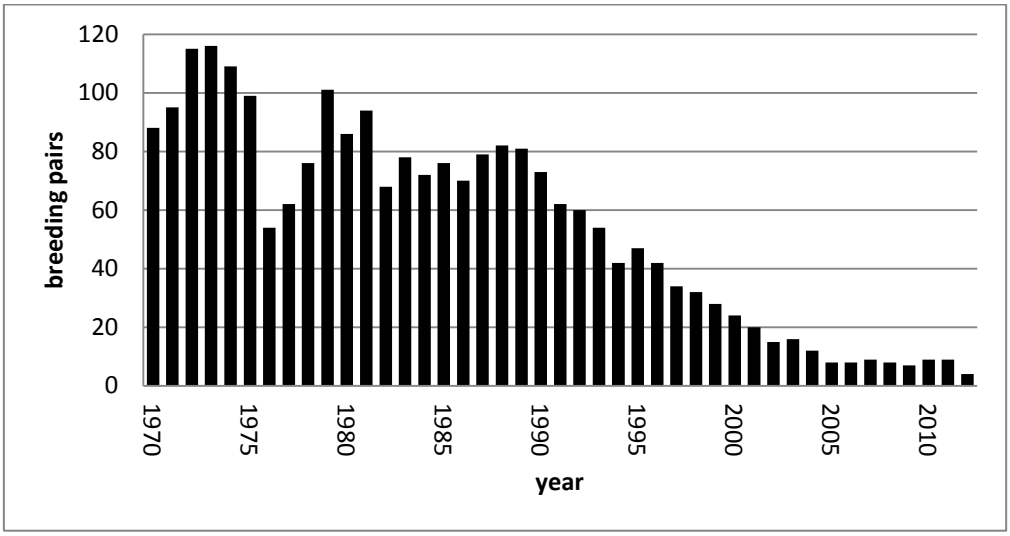

Figure 1: The breeding population of the southern dunlin in Mecklenburg-Western Pomerania 1970–2011.

At the Baltic coast of **Schleswig-Holstein**, the dunlin has been a widespread breeder in the past (*e.g.,* Boie 1822), but disappeared during the 1990s. However, at the North Sea coast it re-established as a breeding bird in 2007 in Rickelsbüller Koog close to the Danish border. In this area (Rickelsbüller and the adjacent Margrethe Koog), the dunlin had already disappeared in 1996. The number of breeding pairs was 1 bp in 2007, 2 bp in 2008, 5 bp in 2009 and 4 bp in 2010. The return of the dunlin to the Rickelsbüller Koog is probably related to dispersal or interchange of birds from the Danish breeding site Rømø (distance *c.* 25 km).

The **Danish** breeding population at the beginning of the 20th century was estimated at 50 000–100 000 bp (Thorup 1997). It plummeted down to less than 1 000 bp at the beginning of the 1960s, but was about stable between 1970 and 1990. Starting at the beginning of the 1990s, the population declined rapidly to 170–180 bp currently, perhaps showing a slight recovery 2008–2011. The population development during the last 5 decades is shown in Table 1 (Thorup *et al.,* in prep.).

Table 1: Population development of the dunlin in Denmark.

	1964	**1970**	**1990**	**2011**
Baltic[2]	596	504	379	88
North Sea	243	240	359	86
Denmark total	**839**	**744**	**738**	**174**

The total Baltic population was estimated at about 1 380–1 660 bp for the period 1994–1998 (HELCOM 2002, amended), 1 110–1 360 bp in 2002 (Thorup 2006), and 500–640 bp in 2007–2011 (Table 2).

Table 2: Population numbers of the dunlin in the Baltic Sea area 1994–1998 and 2007–2011. Data for 1994–1998 according to HELCOM (2002, amended). For Denmark and Schleswig-Holstein, the numbers include the breeding pairs at the North Sea coast.

Country	**Breeding pairs**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	1994–1998	**2007–2011**		
Denmark	450[3]	170–180 (2011)	-	--
Estonia	400–500	200–250	--	-
Finland	100	50–55	0	-
Germany - SH	12–15	1–5	-	--
Germany - MV	32–47	7–9	--	--
Latvia	2–5	0–7 (2000–2004)	?	--
Lithuania	5–50	0–3 (2011)	--	--
Poland	30–40	0	--	--
Russia, KAL	5–8	0		--
Russia, PET	20–30	1-5 (2008)	--	--
Sweden	325–410	75–125 (2010)	--	--
Baltic Sea	**1 380–1 660**	**500–640**		

[2] Includes the Helsinki Convention area, *i.e.* the Limfjord and adjacent waters (Venø Bugt, Kås Bredning, but not Nissum Bredning).
[3] According to Grell (1998)

SPECIES INFORMATION SHEET *Calidris alpina schinzii*

Distribution map

Habitat and ecology

The southern dunlin is a characteristic bird of grazed coastal meadows, but small numbers also breed in peat bogs. Nowadays, the breeding sites are almost exclusively found in coastal areas, whereas in the past the species was also common in the inland.

Description of major threats

Habitat loss due to land reclamation, drainage and conversion to arable land has been considered as reasons for the population decline in the past. However, habitat loss cannot explain the full scope of decline (Blomquist *et al.* 2010).

Changes of the characteristics of the remaining habitats (*e.g.*, due to changes in management / grazing practices; changes in hydrology; abandonment of meadows) seem to be the key factors of the most recent declines. Although a too low grazing pressure on coastal meadows is apparently the main problem, overgrazing by cattle may also play a role (Beintema & Müskens 1987, Baines 1990). On Gotland (Sweden), high numbers of grazing barnacle geese may have a negative impact on otherwise suitable habitats.

Predation, especially by predatory mammals (Red Fox, Raccoon Dog and American Mink) is another important factor (Ottvall 2005). The increase of predatory mammals and the invasion of introduced species are currently considered to be some of the most severe problems for coastal bird conservation (Langgemach & Bellebaum 2005; Kube *et al.* 2005). In Germany, since the mid-1990s coastal birds have largely declined in all areas with free access for predatory mammals (Herrmann 2010), and the dunlin even has completely disappeared from these areas. The last stable breeding site is the island Kirr, where predatory mammals are controlled.

Beside the mammalian predators also some avian predators have increased considerably in recent times. The marsh harrier (*Circus aeruginosus*) has increased since the 1970s in much of its European range (Hagemeijer & Blair 1997). Within the distribution area of the Baltic dunlin, 5–10 fold increases have been observed. At some breeding sites (*e.g.*, Tipperne, DK), the marsh harrier is probably the singlemost important predator for breeding dunlins. Another predator with strong population increase in recent times is the peregrine falcon (*Falco peregrinus*).

However, the factors affecting the breeding success und recruitment rate are obviously quite complex. Field studies in southwest Sweden (Pauliny *et al.* 2008) showed that protection measures against predators increased the hatching success, but not the fledgling success and recruitment rate. Weather conditions, food availability, chick predation and genetic effects are other factors affecting hatching and survival after hatching. According to recent research results, genetic effects (inbreeding depressions) pose a threat to small and isolated populations of the dunlin. Blomquist *et al.* (2010) combined long-term population and fitness data of a metapopulation of southern dunlins breeding on coastal pastures in SW Sweden with two types of molecular markers. The decline of the population was associated with increased inbreeding and loss of genetic diversity (assessed as loss of allelic heterozygosity at 7 microsatellite loci). The loss of genetic diversity resulted in a reduced embryonic survival and probably also a reduced fitness and survival after hatching. However, it has to be emphasized that these results have been derived from a small and isolated population; they probably only apply for such situations. Comprehensive investigations for larger populations in SW Sweden, on Öland, in Estonia and Finland are currently done by the Universities of Göteborg and Oulu, but the results are not yet published. However, as a consequence of the general declining trend in the Baltic Sea area isolation of breeding populations is becoming an increasing phenomenon. For instance, there is currently not one single larger population along the entire southern coast of the Baltic Sea from Germany to Latvia! Hence, the genetic effects may gain increasing importance on the level of the whole Baltic population in the future, if the rate of decline

of the last decade continues.

It is still poorly understood, how general weather patterns and climate change have contributed to the population development. A considerable population increase on the well managed sites in the 1980s and a very rapid decline between 1990 and 2005 in most populations may partly be attributed to climate factors. However, since most dunlin breeding sites are managed, unfavourable climate effects at the presently seen scale can be counteracted by appropriate adjustments of management and land use (*e.g.,* water retention, grazing intensity).

In many Danish sites improper habitat management is still a major issue with fragmentation, drainage and over- or undergrazing being crucial factors affecting the population. But there are probably also other problems. It is worth to mention that in the four most important Danish breeding sites for the species where meadow management is adapted particularly to the demands of Baltic dunlins – Tipperne and Agger Tange in the North Sea part, Bygholm Vejle and Læsø in the Baltic part – the number of breeding dunlins was higher in 2010 than in 1970.

In Mecklenburg-Western Pomerania, the area of coastal meadows with a natural flood regime has increased after 1990 due to restoration projects. In Denmark, Sweden and Lithuania, *Life* projects with the aim to restore or improve habitats for dunlin, Ruff and other waders have been implemented or are under implementation. In Poland, a special project aiming on restoration of breeding habitats for the Dunlin is implemented by the Polish Society for the Protection of Birds in the Beka Nature Reserve. However, to become effective, restoration programmes need to be carried on for years, and even then their ability to re- establish populations seems controversial when immediate results are wanted. Yet, at sites still inhabited by the dunlin, results have been encouraging. In Finland, the population decline has recently halted, which has been attributed to habitat restoration measures. However, on Öland, Sweden, the supply of suitable breeding habitats has not changed during the last two decades when the population was declining.

Since predation of nests and chicks may affect the breeding success and eventually the viability of a population, conservation measures for the remaining breeding sites should also include a management of predatory mammals. Since fragmentation of the landscape favours generalist predators, appropriate habitat management that avoids fragmentation is another element of conservation for the breeding sites.

The main wintering areas of the Baltic dunlin are the estuaries of N and NW Africa (Mauritania, Tunisia, Morocco), which it shares with other dunlin populations of the subspecies *C. alpina schinzii* and *C. alpina arctica* breeding in Greenland and Svalbard, Iceland, Faeroe Islands, Ireland and Great Britain. Furthermore, there are also mid-winter ringing recoveries from southern France (both Atlantic and Mediterranean coasts), indicating that a certain proportion of the population winters in south-west Europe (France, Iberian Peninsula). The autumn migration follows the Wadden Sea and the Atlantic coasts of southern Britain and France (especially the Channel and the Bay of Biscay). Also during spring migration the Bay of Biscay is the staging site with most recoveries. Ringing recoveries from the Mediterranean Sea mainly date from the period 21 February – April, indicating that the Mediterranean coast is mainly frequented during spring migration. Especially the Gulf of Lion is obviously an important staging area (Thorup *et al.* 2009). Factors affecting the birds in their staging and wintering areas may play a role for the development of the Baltic dunlin population, but knowledge on this aspect is scarce.

Assessment justification

The reduction of population size of the dunlin during the last 15 years (3 generations) has been >50%. The reasons for the decline are not well understood and possibly not reversible. Hence, the species is classified as *Endangered* (EN) according to criterion A2ace, and due to the small population size also

according to C1.

Recommendations for actions to conserve the species

The main conservation action is the adjustment of the optimisation of the remaining breeding sites to the habitat requirements of the dunlin. This includes both grazing and water management. Control of predatory mammals is also essential.

Common names

Denmark: Engryle, Estonia: Risla, Risla, rüdi, rüdi, soorüdi, Finland: Suosirri, Germany: Alpenstrandläufer, Latvia: Parastais šņibītis, Šinca šņibītis, Lithuania: Juodakrutis begikas, Juodkrūtis bėgikas, Poland: Biegus zmienny, Russia: Чернозобик, Sweden: Kärrsnäppa

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SPECIES INFORMATION SHEET *Clangula hyemalis* (wintering)

English name: **Long-tailed duck**	Scientific name: ***Clangula hyemalis***	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies,Variations,Synonyms: –	Generation length: 7 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Extra-regional threats (predation, XO), Competition and predation (K03.04) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Hunting (F03.01), Mining and quarrying (C01.01), Water traffic (D03.02), Construction (C03.03, D03.03)	Future threats (Habitats Directive article 17 codes): Breeding: Extra-regional threats (predation, XO), Competition and predation (K03.04) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Hunting (F03.01), Mining and quarrying (C01.01), Water traffic (D03.02), Construction (C03.03, D03.03)	
IUCN Criteria: **A2b**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category VU / LC	EU Birds Directive: Annex II B (DK, EE, FR, IE, LV, FI, SE, UK)	
Protection and Red List status in HELCOM countries: *Hunting not allowed in all EU Member States (Annex II B).* Denmark: –, Estonia: DD, Finland: LC, Germany: "particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: EN (wintering)		

Range description and general trends

The long-tailed duck breeds circumpolar in the arctic tundra and on arctic islands of Eurasia and North America. In Europe, the breeding range extends from Iceland and Central Norway across northern Finland, the Finnish Baltic coast, and the Kola Peninsula to Arctic Russia, where most of the European long-tailed ducks breed. Information on breeding population trends is scare. While the breeding population of Iceland and Greenland is assumed to be stable, the population of W Siberia and N Europe has currently estimated at 1 600 000 birds and assigned decreasing due to the dramatic decline of birds wintering in the Baltic Sea, the most important wintering area for long-tailed ducks in North-west Europe. Important wintering areas outside the Baltic Sea are the waters of Iceland, Norway and Britain (BirdLife International 2004, Bauer et al. 2005, Mendel et al. 2008, Wetlands International 2012).

SPECIES INFORMATION SHEET *Clangula hyemalis* (wintering)

Clangula hyemalis. Photo by Bettina Mendel

Distribution and status in the Baltic Sea region

Long-tailed ducks are regular and common winter and migration visitors in the Baltic Sea from October to May. Most of the Baltic wintering population breeds in western Siberia, while the Fennoscandian birds are assumed to overwinter in the Atlantic Ocean off the Norwegian coast. The results of the Baltic coordinated survey in 2007 to 2009 indicate that the winter population of long-tailed ducks has declined dramatically from 4 272 405 birds in 1988–1993 to 1 486 000 birds, equivalent to 65%. The most important wintering areas are the Pomeranian Bay, the Irbe Strait – Gulf of Riga and Hoburgs Bank – Midsjö Banks south of Gotland (Fig. 1). The decline has been recognized in all three regions: in the Pomeranian Bay numbers decreased by 83%, in the Irbe Strait – Gulf of Riga by 83% and on Hoburgs Bank – Midsjö Banks by 64%. No change has been observed in the numbers of long-tailed ducks wintering in the northern archipelagoes (Durinck et al. 1994, Skov et al. 2011).

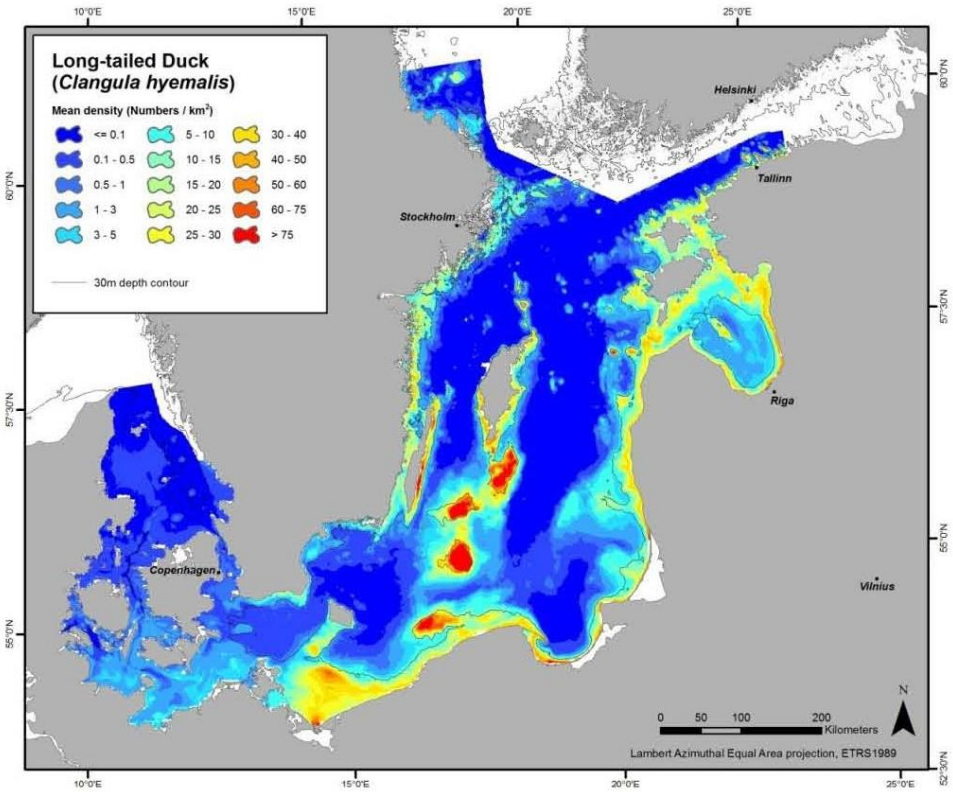

Fig. 1. Distribution and density of wintering long-tailed duck *Clangula hyemalis* in the Baltic Sea, 2007 – 2009. From Skov et al. (2011).

SPECIES INFORMATION SHEET *Clangula hyemalis* (wintering)

Habitat and Ecology

Long-tailed ducks breed mainly in freshwater habitats. They favour small and shallow ponds in the Tundra region outside wooded areas. In areas providing conditions similar to the Tundra the species breeds also along the coast and on inshore islands. During the non-breeding season, long-tailed ducks are gregarious and favour brackish and marine coastal areas as well as shallow offshore banks. In the Baltic Sea, the majority of long-tailed ducks winters offshore in waters up to 35 m depth. During the breeding season, long-tailed ducks feed on a variety of organisms, including mostly insect larvae, as well as fish spawn, crustaceans and molluscs. In the wintering areas the diet consists largely of bivalves, supplemented by polychaete worms, echinoderms, crustacean, small fish and fish spawn (Bauer et al. 2005, Mendel et al. 2008, Skov et al. 2011).

Description of major threats

Long-tailed ducks migrate between their breeding grounds in the Arctic and the wintering sites in temperate areas and are thus exposed to threats in both ecosystems. Although the reasons for the dramatic decline of the Baltic Sea winter population are not yet understood, various pressures were identified that have possibly caused or at least contributed to the observed declines.

In the Arctic breeding grounds, **predation** by snowy owl, arctic fox and skua has always imposed a threat on breeding birds, nests and chicks. The breeding success of long-tailed ducks in the Eurasian tundra correlated with the abundance of lemmings, leading to high reproductive output every 3–4 years when predators concentrated on peaking lemming numbers as prey (Bellebaum et al. 2012b). However, possibly due to the increase in global temperature, regular lemming cycles have nearly disappeared in the Eurasian tundra for at least the last 15 years. At the same time the breeding success of long-tailed ducks has seriously declined, leading to low recruitment and eventually to population decline (Hario et al. 2009). As long-tailed ducks are listed under Annex II of the European Birds Directive, **hunting** is allowed in certain EU countries. The annual hunting bag of this species in the countries of the European Union is estimated at 24 000 (Mooij 2005), while the number of long-tailed ducks hunted in Russia is unknown (Žydelis et al. 2009). Seaducks are among the species most seriously affected by **mortality in gillnets**, as the nets are mainly set in coastal areas and on shallow offshore banks, which are also the most important habitats for species like long-tailed ducks. Long-tailed ducks have been reported as the most frequently bycaught species in several Baltic countries, with an estimated annual bycatch of about 22 000 birds (Žydelis et al. 2009). In the Pomeranian Bay, one of the most important wintering areas, bycatch of long-tailed ducks has decreased over two decades due to declining bird numbers, but the current monthly losses of 0.8% in this area alone still indicate a threat for the Baltic winter population (Bellebaum et al. 2012a). Long-tailed ducks spend large amounts of time swimming on the water and usually form large flocks and concentrate in certain sea areas. Thus, they are highly vulnerable to **oil pollution**. Studies in southern Gotland indicate that in the central Baltic Sea, several tens of thousands of long-tailed ducks are injured by oil each year due to oil spills along the main shipping routes (Larsson & Tydén 2005, Larsson 2007). Long-tailed ducks mainly feed on benthic molluscs and thus depend on areas where bivalves are abundant and accessible to them. Many important habitats of common scoters have already been affected by activities that lead to a **reduction of food supply**, e.g. sand and gravel extraction or sediment dredging. Besides, increasing winter water temperatures and changes in phytoplankton communities due to climate change effects or decreasing nutrient levels can lead to a lower quality of bivalves and thus to food shortage for long-tailed ducks (Mendel et al. 2008). Long-tailed ducks have a very large flight distance with regard to vessels and usually take flight when a ship is approaching (Schwemmer et al. 2011). Thus they are very sensitive to **disturbance by ship traffic**. This pronounced sensitivity to shipping movements may cause the species to avoid busy shipping lanes, as has been observed in the Pomeranian Bay (Kube & Skov 1996). Long-tailed ducks are presumed to move frequently between different wintering sites and migrate also during night. Hence, they are particularly at risk of colliding with **offshore wind turbines and other obstacles**. Barrier effects and habitat loss for long-tailed ducks have been documented at the wind farms Utgrunden, Sweden, and Nysted, Denmark

(summarised in Dierschke & Garthe 2006).

Assessment justification

The species has a very large range and a large population size and hence it does not approach the thresholds for a Red List Category under criteria B, C and D. However, the two comprehensive Baltic Sea surveys indicated that the winter population of long-tailed ducks has undergone a dramatic decline from ca. 4 272 000 birds in 1988–1993 to 1 486 000 birds in 2007–2009, equivalent to 75% over three generations (1993–2014; 21 years, according to the Swedish Red List, Tjernberg & Svensson 2007). Hence, the species is classified as *Endangered* (EN) according to criterion A2b, as the causes of the reduction are not yet understood and the reduction may not have ceased.

Recommendations for actions to conserve the species

In the Arctic breeding areas, management options are very limited. Thus, protection measures at the wintering sites are essential to stop the population decline of long-tailed ducks. As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. Reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds, ship traffic regulations and hunting regulations are some options that are likely to support the recovery of this species.

Common names

Denmark: havlit, Estonia: aul, Finland: alli, Germany: Eisente, Latvia: kākaulis, Lithuania: ledinė antis, Poland: lodówka, Russia: Морянка, Sweden: alfågel

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SPECIES INFORMATION SHEET *Larus melanocephalus*

English name: **Mediterranean gull**	Scientific name: ***Larus melanocephalus***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae	Species authority: Temminck, 1820	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Random threat factors (–), Alien species (I01), Competition and predation (I02)	Future threats (Habitats Directive article 17 codes): Random threat factors (–) , Alien species (I01), Competition and predation (I02)	
IUCN Criteria: **D1**	**HELCOM Red List Category:**	**EN** **Endangered**
Global / European IUCN Red List Category (BirdLife International 2004) LC /LC	Annex I EU Birds Directive yes Annex II EU Birds Directive no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: NA, Estonia: NA, Finland: –, Germany: * (Not threatened), Latvia: –, Lithuania: –, Poland – /–, Russia: –, Sweden: –		

Range description and general trends

The Mediterranean gull has a widespread, but patchy distribution in Europe. The range of the species is almost restricted to this continent, but it expands also to central Turkey. The total population is large (>120 000 bp) and increased during 1970–1990, in much of its range also during 1990–2000. The main breeding areas are the Mediterranean and the Black Sea (BirdLife International 2004). During the 20th century, the species expanded its range. Since 1970, it is a regular breeder in The Netherlands and Belgium with increasing population numbers (Meininger & Flamant 1998). Around 2000, the western European population (France, Belgium, The Netherlands, Germany, and UK) counted already almost 5,000 bp (BirdLife International 2004). The colonization of the Baltic started in 1951, when the first breeding of a Mediterranean gull was recorded on the island Langenwerder, Mecklenburg-Western Pomerania.

Larus melanocaphalus.
Photo by Mathias Putze.

Distribution and status in the Baltic Sea region

The Mediterranean gull has expanded its range to the Baltic Sea area during the second half of the 20th century. It colonized Denmark, Germany and Poland, and bred in single cases in Sweden and Estonia. The population increased slowly, but remained small with still < 100 bp.

In **Sweden**, several breeding or breeding attempts with black-headed gull and common gull colonies

have been recorded since the mid-1990s. However, genuine breeding or breeding attempts could not be confirmed before 2008. In 2008, there was a breeding attempt in Malmö; in 2010, 2 pairs bred successfully in Blekinge (Sölvesborg); in 2011, there were two breeding attempts, one in Blekinge and one in Västergötland (Vänersborgsviken). The species is obviously immigrating into Sweden, but it cannot yet be considered as an established breeder.

In **Estonia**, two breeding records have been recorded: 1962 one nest with 2 eggs on the islet of Kuralaid (Oriku group of islands), and 1967 one nest with 1 egg on the same islet.

In **Poland**, until 1980 the Mediterranean gull was only known as a rare visitor. It started breeding in 1981. During the 1990s, it colonized both coastal and inland breeding sites (Tomiałojć & Stawarczyk 2003). The main breeding sites are found along large rivers, where the birds nest on islets with sparse vegetation. In coastal areas, breeding has been confirmed near Elblag, Gdynia and Swinoujscie. The total population in 2000–2005 was 18–30 confirmed breeding pairs, but 28–54 bp if probable breeding is included (Sikora *et al*. 2007).

At the **German** Baltic coast of Mecklenburg-Western Pomerania, the first breeding of the Mediterranean gull was recorded in 1951, when a male *Larus melanocephalus* bred with a female *Larus canus* on the island Langenwerder. Two years later a pair of *Larus melanocephalus* bred on the same island (Dost 1965). Starting in 1958, the species became a regular breeding bird with fluctuating numbers of 1–10 bp, breeding on different coastal islands (Langenwerder, Heuwiese, Kirr, Barther Oie and others). During the last 5 years (2007–2011) the number of breeding pairs was 3–9.

In Schleswig-Holstein, the first breeding attempts have been recorded in 1965 on the coastal islands Graswarder and Oehe/Schleimünde. Since 1969 the Mediterranean gull is breeding on inland lakes. Since the end of the 1990s, it also breeds at the North Sea coast. The total population in the eastern (Baltic) parts of Schleswig-Holstein fluctuates between 8 and 12 bp (numbers 2007–2011). The main permanent breeding sites are the Nature Reserve Graswarder and some inland gull colonies in the lake area near Plön (Berndt et al. 2002). In recent times, the species also has bred on roofs of the city of Kiel and the sea resort Weißenhäuser Strand.

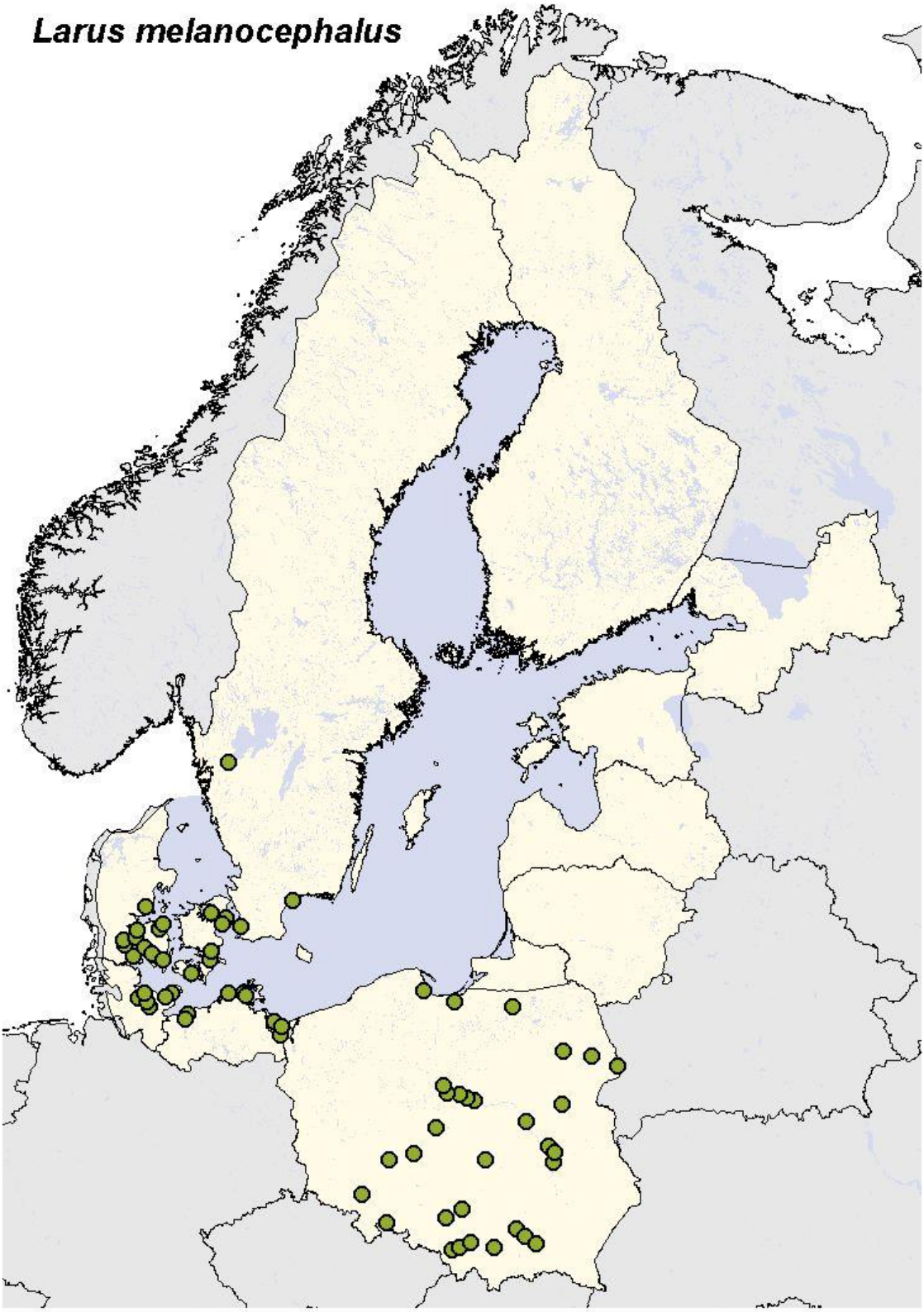
In **Denmark**, the Mediterranean gull breeds both at the North Sea and Baltic Sea coasts. The first breeding took place in 1970 on the island Enø in the Baltic. Until 1999, *Larus melonocephalus* was only an occasional breeder in the Danish Baltic. Since then it has established as a regular breeder in low numbers (Olsen 1992, Hansen 2004). A maximum of 16 pairs was recorded in 2006 (Hansen 2007), and in 2010 9–10 pairs were found (Hansen 2011).

Table 1: Population numbers of the Mediterranean gull *Larus melanocephalus* in the Baltic Sea area. For population trends 0=stable, +=increasing.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**year**		
Sweden	2	2010–2011	+	
Estonia	Exceptional breeding bird	1962 and 1967		
Poland	28–54	2000–2005	+	+
Germany - MV	3–9	2007–2011	0	+
Germany - SH	8–12	2007–2011	0	+
Denmark	7–16	2006–2010	+	+
Baltic Sea	**50–95**			

SPECIES INFORMATION SHEET *Larus melanocephalus*

Distribution map



SPECIES INFORMATION SHEET *Larus melanocephalus*

Habitat and ecology

Larus melanocephalus breeds on coastal bird islands, usually within colonies of black-headed gulls (*Larus ridibundus)* or common gulls (*Larus canus*). Inland breeding places are found on islands with gull colonies on lakes, on river islets with sparse vegetation or at reservoirs. The Baltic population is migratory. Ringing recoveries of birds ringed in Mecklenburg-Western Pomerania reveal the British islands and the coasts of the British Channel being the main wintering area (Heinicke 2009, unpublished). Birds ringed in the Netherlands and Belgium have been recorded in the same area, but also along the Atlantic coasts of France, Spain, Portugal up to Morocco (Boldreghini *et al.* 1992). There is a movement of birds from the Black Sea to the Baltic, as it was shown by a bird which has hatched 1975 at the Ukrainian Black Sea coast and bred 1978 in the Wismar Bight/ Mecklenburg-Western Pomerania. Birds from the Mediterranean Sea have been found to establish as breeders in north-western Europe (Boldreghini *et al.* 1992).

Description of major threats

The population of the Mediterranean gull in the Baltic Sea area is stable to slowly increasing on a low level. The number of breeding sites is limited. Hence, the species is vulnerable to random threat factors (RTF). Furthermore, the problem of predation by non-native and native predators exists also for *Larus melanocephalus*.

Assessment justification

The species is classified, according to the small population size (<250 mature individuals), as *Endangered* (EN) (criterion D1).

Recommendations for actions to conserve the species

Conservation measures have to focus on the breeding places, which are usually colonies of *L. ridibundus* or *L. canus* on small islands. An appropriate grazing regime to prevent overgrowth and control of predatory mammals are the main actions to be taken.

Common names

Denmark: Sorthovedet mage, Estonia: Karbuskajakas, Finland: Mustanmerenlokki, Germany: Schwarzkopfmöwe, Latvia: Melngalvas kaija, Lithuania: Juodagalvis kiras, Poland: Mewa czarnogłowa, Russia: Черноголовая чайка, Sweden: Svarthuvad mås

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SPECIES INFORMATION SHEET *Melanitta fusca*

English name: **Velvet scoter**	Scientific name: ***Melanitta fusca***	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: *Melanitta fusca fusca*; white-winged scoter	Generation length: 7 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Alien species (I01), Competition and predation (I02), Human disturbance (G01), Other threat factors (Loss of specific habitat features, J03.01), Eutrophication (H01.05) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Hunting (F03.01), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Alien species (I01), Competition and predation (I02), Human disturbance (G01), Other threat factors (Loss of specific habitat features, J03.01), Eutrophication (H01.05) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Hunting (F03.01), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria breeding: **A2b**	**HELCOM Red List Category breeding:**	**VU Vulnerable**
IUCN Criteria wintering: **A2b**	**HELCOM Red List Category wintering:**	**EN Endangered**
Global / European IUCN Red List Category EN / LC	EU Birds Directive: Annex II B (DK, DE, FR, IE, LV, FI, SE, UK)	
Red List status in HELCOM countries: Denmark: –, Estonia: LC, Finland: NT, Germany: “particularly protected” under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT (breeding)		

Range description and general trends

The velvet scoter has an extensive Holarctic distribution, breeding across the higher middle latitudes of North America and Eurasia. Compared to common scoter, the breeding range is less restricted to arctic regions. Only the nominate form occurs in the Western Palearctic, with a breeding range that extends from Norway to east of the Yenisey River (85°E). There are also breeding populations along the Baltic coasts of Sweden, Finland, Russia and Estonia, with a tiny, isolated population in the Caucasus and Turkey. In Fennoscandia the population is mostly coastal, with Finland and Sweden having small inland populations only. In Norway the population breeds entirely inland. The European population counts 85 000–100 000 bp and was stable during 1970–1990. The Baltic population represents about 25% of the European one (BirdLife International 2004; European Commission 2007). The population in Russia suffered declines of 20–29% during 1990–2000, and those in Sweden of even >50% during 1980–2010. In Finland and Estonia, the species also has decreased.

SPECIES INFORMATION SHEET *Melanitta fusca*

In the Western Palaearctic, velvet scoters winter mostly in the Baltic Sea as well as in the North Sea and along the North Atlantic coastal regions from Norway through the UK / Ireland to Brittany. A small winter population occurs in the Black Sea and Caucasus. Low numbers, mostly juvenile birds, are regularly seen in inland areas (Mendel et al. 2008, BirdLife International 2012). In the Pomeranian Bay, there is a small moulting site of velvet scoters around the Odra Bank, probably the southernmost moulting area of this species (Sonntag et al. 2004).

Melanitta fusca. Photo by Martti Hario, Finnish Game and Fisheries Research Institute.

Distribution and status in the Baltic Sea region

Velvet scoters breed along the Baltic Sea coast of Sweden, Finland, Russia and Estonia. The species is a regular and common winter and migration visitor in the Baltic Sea area from September to May. Besides, there is a small moulting area in the Pomeranian Bay around the Odra Bank. Thus, velvet scoters can be found in the Baltic Sea area throughout the year (Durinck et al. 1994, Sonntag et al. 2006).

Breeding

In **Sweden**, there are two geographically separate breeding populations. Most velvet scoters breed on the Baltic coast (*c*. 8 800), while a smaller population (about 1 200 bp) is found in mountain areas (Ottosson et al. 2012). A substantial decrease was reported from the 1940s to the 1990s for the south-east coast (Curry-Lindahl et al. 1970, Svensson et al. 1999).

In the Stockholm archipelago area, a decline of 89% of the breeding population was recorded between 1975 and 2000 to 2003 (European Commission 2007). Along the northern part of the east coast the species has increased during the last few decades (Svensson *et al.* 1999). For the entire Swedish coastal population, a decline of 50–79% during the last 30 years, 20–40% during the last 20 years (3 generations), and 10–19% during the last 10 years has been noted. A new inventory in the mountain area shows that the population has decreased with about 50% during last 30 years. At present, the total Swedish breeding population is estimated at 8 000–12 000 bp.

In **Finland,** the velvet scoter breeds inland and along the coast with a particularly large population in the Åland Archipelago. The inland population is confined to the north and northeast being sparsely distributed only in the lake areas (Hario 2000). During the middle of the twentieth century a marked decline was reported due to hunting. In the early 1990s about 1 000 pairs were believed to breed inland (Väisänen et al. 1998). A census of the Finnish coastal breeding population during 1997 estimated 13 000 pairs with about 6 000–7 000 pairs occupying the Åland Islands and most of the others breeding on the mid-Bothnian coast (Hario 2000). The census showed the Finnish coastal population having stabilized at a low level following a period of continuous decrease in numbers and range from the 1960s to the early 1990s (Hario 2000). The size of Åland population estimates has been subject to some controversy. Earlier estimates by the Provincial Government were of 60 000–70 000 pairs (Tucker 1996). Survey work (during 1986–1989) for the second Finnish breeding atlas, however, gave a maximum of 8

000 pairs for the entire south-west archipelago of Finland, which includes Åland, with 1 000–5 000 pairs elsewhere on the coast. In 1999–2001, the breeding population in Finland was estimated at 14 000–16 000 pairs (BirdLife International 2004). An almost similar figure for Finland of 12 000–15 000 pairs in the mid-1990s is given by Koskimies (1997). For 2009, the population was estimated at 10 000 bp.

The **St Petersburg** region of **Russia** hosts a small population of *c.* 10 bp, perhaps slightly more, with a negative short-term trend.

The **Estonian** population was estimated at *c.*1 000 pairs during the mid-1980s (Berndt & Hario 1997). This estimate is not very different from that of *c.*1 100 pairs made by Onno (1965, cited in Cramp & Simmons 1977) who thought the population to be steadily decreasing. Surveys in the early 1990s resulted in an estimate of less than 500 pairs with some areas suffering significant reductions. For 1998, the Estonian population was estimated at 500–900 bp (BirdLife International 2004). The latest numbers given by Elts *et al.* (2009) are 400–700 bp.

Table1: Population numbers of the velvet scoter in the Baltic Sea area. For population trends 0=stable, -=decreasing, (+)=slightly increasing.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	8 000–12 000	2010	-	-
Finland	10 000	2009	-	-
Russia, PET	10	2009	-	0
Estonia	400–700	2003–2008	(+)	-
Baltic Sea	**18 400–22 700**			

Wintering

During the Baltic Sea survey in the early 1990s, the Pomeranian Bay and the Gulf of Riga – Irbe Strait were identified to be of exceptional importance for velvet scoters. The main concentrations in the Gulf of Riga were found in Latvian waters, while the largest flocks in the Irbe Strait occurred in Estonian waters. Other important wintering areas were the north-west Kattegat, the shallow waters off the cast of Poland and the southern part of the Lithuanian coast (Durinck et al. 1994). The survey from 2007–2009 confirmed the Irbe-Strait - Gulf of Riga and the Pomeranian Bay as the most important wintering areas of velvet scoters, and high concentrations were also found along the Polish coast and the coast of Latvia and Lithuania (Skov et al. 2011; Fig.). However, numbers of wintering birds have been decreasing considerably between the two survey periods. Numbers in the Pomeranian Bay and in the Irbe Strait / Gulf of Riga have dramatically declined by 65% and 86%, respectively, numbers in the northwestern Kattegat by 99% and numbers along the Central Polish coast by 52%. Significant increases in numbers were observed in the coastal areas along Lithuania and Latvia (Skov et al. 2011). The overall Baltic Sea winter population of velvet scoters has declined from c. 932 700 birds in 1988–1993 to 373 000 birds in 2007–2009, equivalent to 60% over 16 years.

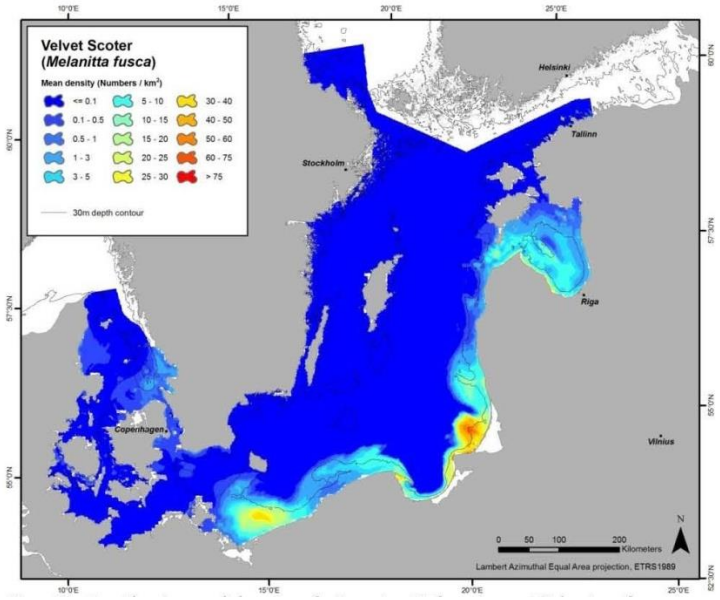

Fig. 1. Distribution and density of wintering velvet scoter *Melanitta fusca* in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and ecology

The velvet scoter is a seaduck, *i.e.* a diving duck species that outside the breeding season inhabits marine environments. Velvet scoters mainly **breed** in boreal and montane habitats in the upper middle latitudes. There is a frequent association with trees and shrubs during breeding both at inland lakes, pools and rivers within wooded tundra and taiga zones in the continental interior, and on wooded shores and islands of the Baltic (Cramp & Simmons 1977). Nests are well dispersed at concealed sites close to either fresh or brackish water. In Sweden and Finland, the largest numbers are found in coastal archipelagos where the velvet scoter prefers clear water. Inland they breed scattered among mountain lakes of the north and on boreal coniferous forest lakes in Kuusamo district of north-eastern Finland. In Finland, many islands of the coastal archipelagos are less than 5 ha and densities of 2.5 breeding pairs per ha have been found (M. Hario, *unpubl.*). Although the species is not colonial, birds on islets can exceptionally breed in aggregations with distances between nests as close as 3 m (Cramp & Simmons 1977). In some coastal areas, as a means to reduce egg depredation, velvet scoters nest in association with gull (Laridae) and tern (Sternidae) colonies.

Velvet scoters **winter** in brackish or marine areas as well as on large, deep lakes, large rivers or reservoirs. In the Baltic Sea, they are found in shallow offshore waters with a preference for areas with water depths between 10 and 30 m (Skov et al. 2011). A study of velvet scoters wintering along the Lithuanian coast demonstrated a preference for marine areas with sandy substrates at depths between 2 and 30 m (Žydelis 2000). In the Pomeranian Bay the species occurred in waters with sandy sediments up to 30 m depth but was most frequently found up to 15 m depth (Sonntag 2009).

During the breeding season, velvet scoters feed on a variety of organisms, including insects and insect larvae, small fish, and plant material (del Hoyo et al. 1992). In the Baltic Sea wintering areas the diet largely consists of marine bivalves, which are harvested on or up to three centimeters below the surface of pure coarse or sandy sediment in waters up to 20 m deep (Fox 2003). Besides, the species also takes small fish, polychaete worms, gastropods and crustaceans (Mendel et al. 2008).

Description of major threats

Velvet scoters migrate between their breeding grounds in the tundra and the wintering sites in temperate areas and are thus exposed to threats in both ecosystems. Furthermore, velvet scoters use the Baltic Sea area for moulting, a phase in which they are flightless and particular sensitive to disturbance. Although the reasons for the dramatic decline of the Baltic Sea winter population are not yet understood, various pressures were identified that have possibly caused or at least contributed to the observed declines, including **hunting**, **oiling, drowning in fishing gear, human disturbances**, and at least in the north also **eutrophication** and **predation** by gulls. Yet, no new analysis of the vital rates of the species has been conducted since the pioneering work of Koskimies (1957a,b) in the Gulf of Finland. Hence, the mechanisms of the present-day decline – whether due to increased mortality or decreased natality – are unclear. Traditionally, the velvet scoter has been seen as poorly adapted to the marine milieu due to its loose parent-offspring relationships. Yet, females show anti-predator tools that equal those of the eider, and in some years the fledgling production in the Finnish archipelago is very good (Hario 2008). In most years, however, the breeding success is poor in the outer archipelago, but it can be reasonable good in the vast inner zones of SW Finland and Åland archipelagos. Due to the late timing of the breeding season in mid-summer, velvet scoters are particularly sensitive to **human disturbance** (Berndt & Hario 1997). In the 1990s, Mikola et al. (1994) observed a strong influence of recreational boat traffic on breeding velvet scoters in the SW Finland archipelago, leading to smaller broods and restricted feeding time of ducklings. At least 60% of the ducklings died within the first three weeks. Furthermore, the authors observed considerable higher **predation** by large *Larus*-gulls in disturbed situations. Velvet scoters suffering from predation by ground predators, like feral American Mink, in the breeding grounds in SW Finland has also more recently been described by Nordström et al. (2002). In the Taiga and lower Tundra regions the species is threatened by **habitat degradation** due to human exploitation of natural resources (Kear 2005, zit. in BirdLife International 2012). As velvet scoters are listed under Annex II of the European Birds Directive, **hunting** is allowed in certain EU countries, and several thousand birds are shot e.g. in Denmark each year (Bregnballe et al. 2006). Population declines of velvet scoters at the beginning of the 20th century were caused by hunting activities and illegal poaching (Berndt & Hario 1997). Seaducks are among the species most seriously affected by **mortality in gillnets**, as the nets are mainly set in coastal areas and on shallow offshore banks, which are also the most important habitats for species like velvet scoters. More than 73 000 birds are annually caught in gill nets in the Baltic Sea, with sea ducks forming the majority of victims. Velvet scoters are frequently caught in gill nets in the eastern part of the Baltic Sea, especially in Poland and in Lithuanian coastal waters (Žydelis et al. 2009). Velvet scoters spend large amounts of time swimming on the water and usually form large flocks and concentrate in certain sea areas. Thus, they are highly vulnerable to **oil pollution**. Oiling has been identified as one of the most important threats to seabirds and waterbirds in several Baltic Sea countries and wintering and moulting sea ducks are among the species most seriously affected (Žydelis & Dagys 1997, Mendel et al. 2008). More than 7 200 oiled velvet scoters were counted during an aerial survey following the oil tanker accident in the Kattegat in March 1972 (Joensen & Hansen 1977). Velvet scoters mainly feed on benthic molluscs and thus depend on areas where bivalves are abundant and accessible to them. Many important habitats of velvet scoters have already been affected by activities that lead to a **reduction of food supply**, e.g. sand and gravel extraction or sediment dredging. Besides, increasing winter water temperatures and changes in phytoplankton communities due to climate change effects or decreasing nutrient levels can lead to a lower quality of bivalves and thus to food shortage for velvet scoters. Velvet scoters have a large flight distance with regard to vessels and usually take flight when a ship is approaching (Garthe et al. 2004; Bellebaum et al. 2006). Thus they are very sensitive to **disturbance by ship traffic**. In the Pomeranian Bay flight distances of several hundred metres up to 1 km were measured (Schwemmer et al. 2011). This pronounced sensitivity to shipping movements may cause velvet scoters to avoid busy shipping lanes and thus leading to permanent habitat loss, as has been observed for several other seaduck species (e.g. Hüppop et al. 1994, Kube & Skov 1996). Velvet scoters migrate in low flight altitudes and also during night and have only moderate flight manoeuvrability. Furthermore, they have restricted habitat use flexibility and are easily disturbed by ship and helicopter traffic. Hence, the species is particularly at risk of colliding

with **offshore wind turbines and other obstacles** and has one of the highest rankings in the wind farm sensitivity index (Garthe & Hüppop 2006). Barrier effects and habitat loss for migrating velvet scoters have been documented at wind farms in the North and Baltic Sea (summarized in Dierschke & Garthe 2006).

Assessment justification

Breeding

In the long term, the Baltic population of the velvet scoter has declined considerably. In Sweden, the decline was c. 30% during the last 20 years (3 generations). For Finland, the 2010 TRIM estimates of the Ntl. Archipelago Bird Census gave an annual mean decrease of 3.7% since the mid-1990s. In Estonia, however, stabilization seems to have happened. The species is categorized as *Vulnerable* (VU) according to criterion A2b.

Wintering

The species has a very large range and a large population size and hence it does not approach the thresholds for a Red List Category under criteria B, C and D. However, the two comprehensive Baltic Sea surveys indicated that the winter population of velvet scoters has undergone a dramatic decline from ca. 932 700 birds in 1988–1993 to 373 000 birds in 2007–2009, equivalent to 70% over three generations (1993–2014, 21 years; 1993–2014, according to the Swedish Red List, Tjernberg & Svensson 2007). Hence, the species is classified as *Endangered* (EN) according to criterion A2b, as the causes of the reduction are not yet understood and the reduction may not have ceased.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures in the breeding and wintering areas need to be considered. Disturbance of nesting sites and duckling feeding areas need to be prevented in the breeding areas to avoid human-induced impacts on breeding success. Improving the reproduction by reducing predation pressure on ducklings could be taken in consideration and the species should be deleted from Annex II B of the EU Bird's Directive. Reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options for the wintering areas that are likely to support the recovery of this species. A molecular study should be started to reveal whether there exist exchange and recruitment from the Siberian passing birds to the Baltic Sea breeding population.

Common names

Denmark: fløjlsand, Estonia: tõmmuvaeras, Finland: pilkkasiipi, Germany: Samtente, Latvia: baltspoguļa tumšpīle, tumšā pile, Lithuania: nuodegule, nuodėgulė, Poland: uhla, Russia: Турпан, Sweden: svärta

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SPECIES INFORMATION SHEET — *Melanitta nigra* (wintering)

English name: **Common scoter**	Scientific name: ***Melanitta nigra* (wintering population)**	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 7 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Competition and predation (K03.04) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Hunting (F03.01), Extra-regional threats (overfishing of bivalves in North Sea, XO), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Competition and predation (K03.04) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Hunting (F03.01), Extra-regional threats (overfishing of bivalves in North Sea, XO), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria: **A2b**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex II B (DK, DE, EE, FR, IE, LV, FI, SE, UK), Annex III B	
Protection and Red List status in HELCOM countries: *Hunting not allowed in all EU Member States (Annex II B).* Denmark: – (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: NA, Finland: LC (listed as "Threatened Species" in the Nature Conservation Decree Annex 4), Germany: "particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: LC (breeding)		

Range description and general trends

The common scoter breeds from Iceland and the UK / Ireland through northern Eurasia to East Siberia. The species was recently split from *Melanitta americana*, which breeds further eastward and in North America (Bauer et al. 2005). The breeding population in Europe is estimated at 100 000 to 130 000 pairs, with highest numbers in Russia, Norway, Sweden and Finland (BirdLife International 2004). Since the 1960s, the overall population in Europe has been largely stable, but the species has suffered from minor regional losses along the southern edge of its distribution. Numbers breeding in Finland appear to have been stable or increasing slightly since the 1990s, and the same trend was observed in Sweden since the 1970s. The most important wintering areas are situated in the Baltic Sea, the Wadden Sea and along the Atlantic coast from Norway down to North Africa (Mendel et al. 2008).

Distribution and status in the Baltic Sea region

Common scoters are regular and common winter and migration visitors in the Baltic Sea from October to May. Besides, the Pomeranian Bight and the Kattegat are important moulting areas from June to September. Thus, common scoters can be found in the Baltic Sea year-round (Sonntag et al. 2006, Mendel et al. 2008). The most important wintering area is the north-western part of the Kattegat, which comprises the largest number of common scoters in Europe. Other important areas are the Pomeranian Bay, Kiel Bay and the northwestern Gulf of Riga, but the species also occurs along the entire mainland coast (Fig. 2). The results of the Baltic coordinated survey in 2007 to 2009 indicate that the winter population of common scoters has declined markedly from 783 310 birds in 1988–1993 to 412 000 birds in 2007–2009, equivalent to 47% over 16 years. A slight relocation of wintering birds to the north was

observed between the two surveys. While numbers decreased in the Kattegat, Kiel Bay and the Pomeranian Bay, numbers increased in the Gulf of Gdansk, in parts of Sweden, along the mainland coasts of Latvia and Lithuania and in the Gulf of Riga (Skov et al. 2011).

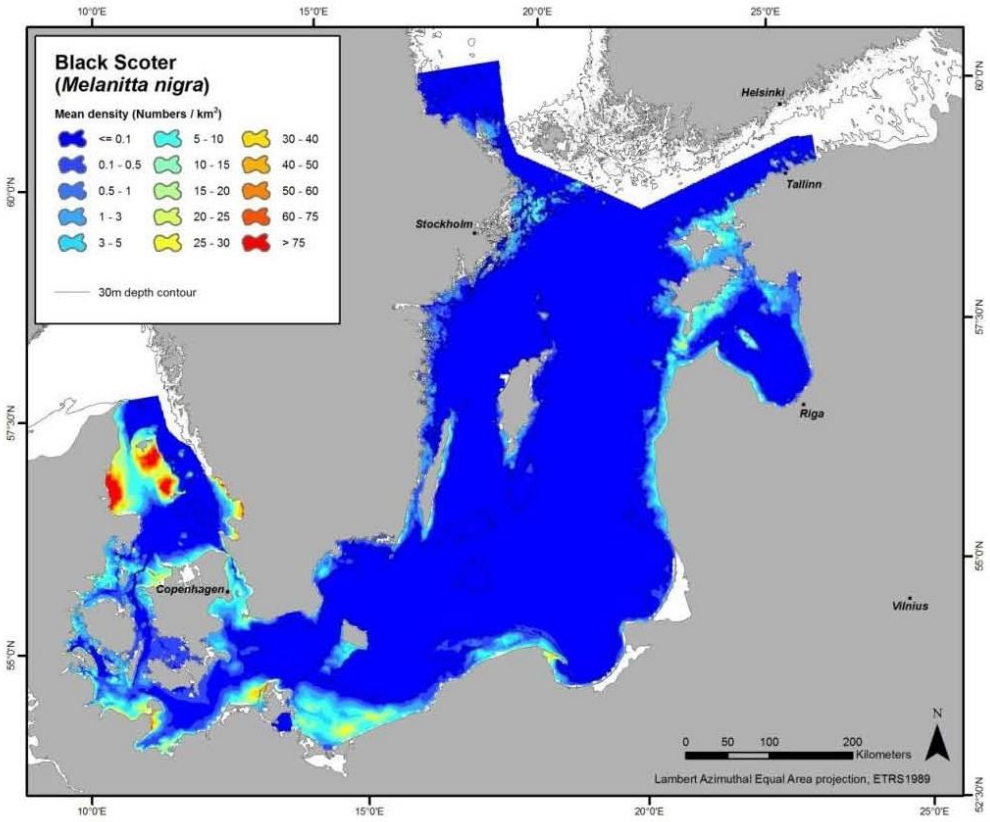

Fig. 2. Distribution and density of wintering common scoter *Melanitta nigra* in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and Ecology

Common scoters breed in the Tundra region up to the high mountains, where they use various habitats like dwarf shrub heath and low banks along forest and high moor lakes and slow-flowing rivers, with ample shrubs and herbaceous vegetation for nesting cover. During the non-breeding season, common scoters are gregarious and restricted to brackish and marine areas, where they occur in shallow waters along the coast and on shallow offshore banks (Mendel et al. 2008, BirdLife International 2012). In the Baltic Sea, common scoters show a preference for areas with water depths between 5 and 15 m (Skov et al. 2011). During the breeding season, common scoters feed on a variety of organisms, including molluscs, crustaceans, insect larvae, small fish, fish spawn and plant material (BirdLife International 2012). In the wintering areas the diet consists largely of marine bivalves, which are harvested on or up to three centimeters below the surface. Thereby, common scoters are assumed to choose their diet according to abundance, availability and energetic content of prey items rather than being restricted to certain prey species (Fox 2003).

Description of major threats

Common scoters migrate between their breeding grounds in the Tundra and the wintering sites in temperate areas and are thus exposed to threats in both ecosystems. Furthermore, common scoters use the Baltic Sea area for moulting, a phase in which they are flightless and particular sensitive to

disturbance. Although the reasons for the dramatic decline of the Baltic Sea winter population are not yet understood, various pressures were identified that have possibly caused or at least contributed to the observed declines.

As ground breeding species, common scoters are threatened by **predation** from mammalian or bird predator species. Although their breeding range is less restricted to Arctic Tundra regions, common scoters are likely to be negatively affected by the current changes in predator-prey interactions in the Arctic Tundra and increasing predation by snowy owl, arctic fox or skua due to the failure of the regular lemming cycle as a consequence of global warming (Bellebaum et al. 2012), as has been reported for e.g. long-tailed ducks and Steller´s eiders (Hario et al. 2009). As common scoters are listed under Annex II of the European Birds Directive, **hunting** is allowed in certain EU countries. Several thousand birds are probably shot in Denmark each year (Bregnballe et al. 2006). Seaducks are among the species most seriously affected by **mortality in gillnets**, as the nets are mainly set in coastal areas and on shallow offshore banks, which are also the most important habitats for species like common scoters. More than 73 000 birds are annually caught in gill nets in the Baltic Sea, with sea ducks forming the majority of victims. High mortality of common scoters has been reported from the south-western parts of the Baltic Sea, especially from Germany and Poland (Žydelis et al. 2009). Common scoters spend large amounts of time swimming on the water and usually form large flocks and concentrate in certain sea areas. Thus, they are highly vulnerable to **oil pollution**. Oiling has been identified as one of the most important threats to seabirds and waterbirds in several Baltic Sea countries and wintering and moulting sea ducks are among the species most seriously affected (Žydelis & Dagys 1997, Mendel et al. 2008). Common scoters mainly feed on benthic molluscs and thus depend on areas where bivalves are abundant and accessible to them. Many important habitats of common scoters have already been affected by activities that lead to a **reduction of food supply**, e.g. sand and gravel extraction or sediment dredging. Besides, increasing winter water temperatures and changes in phytoplankton communities due to climate change effects or decreasing nutrient levels can lead to a lower quality of bivalves and thus to food shortage for common scoters (Mendel et al. 2008). Common scoters have a very large flight distance with regard to vessels and usually take flight when a ship is approaching (Garthe et al. 2004, Bellebaum et al. 2006). Thus they are very sensitive to **disturbance by ship traffic**. A study in the southern Baltic Sea revealed that the duration of temporary habitat loss due to approaching ships is longest for common scoters among sea ducks, and no clear habituation to channeled ship traffic was found (Schwemmer et al. 2011). In the Irish Sea, common scoters occurred in lowest numbers or were absent from areas in which shipping activity was relatively intense, even when these areas held a high prey biomass (Kaiser et al. 2006). This pronounced sensitivity to shipping movements may cause common scoters to avoid busy shipping lanes and thus leading to permanent habitat loss, as has been observed in the North Sea (Hüppop et al. 1994). Common scoters move frequently between different wintering sites, migrate mainly at night and have only moderate flight manoeuvrability. Hence, they are particularly at risk of colliding with **offshore wind turbines and other obstacles** (Garthe & Hüppop 2006). Barrier effects and habitat loss for common scoters due to wind farms have been documented for the North and Baltic Seas (summarized in Dierschke & Garthe 2006). Recent studies, however, suggest that common scoters may occur in high densities in wind farm areas, but only a number of years after initial construction (Petersen & Fox 2007).

SPECIES INFORMATION SHEET *Melanitta nigra* (wintering)

Assessment justification

The species has a very large range and a large population size and hence it does not approach the thresholds for a Red List Category under criteria B, C and D. However, the two comprehensive Baltic Sea surveys indicated that the winter population of common scoters has undergone a dramatic decline from ca. 783 000 birds in 1988–1993 to 412 000 birds in 2007–2009, corresponding to 57% over three generations (1993–2014, 21 years; GL = 7, M. Tjernberg, written). Hence, the species is classified as *Endangered* (EN) according to criterion A2b, as the causes of the reduction are not yet understood and the reduction may not have ceased.

Recommendations for actions to conserve the species

In the Tundra and high mountain breeding areas, management options are very limited. Thus, protection measures at the wintering sites are essential to stop the population decline of common scoters. As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. Reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds, ship traffic regulations and hunting regulations are some options that are likely to support the recovery of this species.

Common names

Denmark: sortand, Estonia: mustvaeras, Finland: mustalintu, Germany: Trauerente, Latvia: jūras teteris, Lithuania: juodoji antis, Poland: markaczka, Russia: Синьга, Sweden: sjöorre

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Skov, H., S. Heinänen, R. Žydelis, J. Bellebaum, S. Bzoma, M. Dagys, J. Durinck, S. Garthe, G. Grishanov, M. Hario, J.J. Kieckbusch, J. Kube, A. Kuresoo, K. Larsson, L. Luigujõe, W. Meissner, H.W. Nehls, L. Nilsson, I.K. Petersen, M. Mikkola Roos, S. Pihl, N. Sonntag, A. Stock & A. Stipniece (2011): Waterbird populations and pressures in the Baltic Sea. TemaNord 550, 201 pp.

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Žydelis, R. & M. Dagys (1997): Winter period ornithological impact assessment of oil related activities and sea transportation in Lithuanian inshore waters of the Baltic Sea and in the Kursiu Lagoon. Acta Zoologica Lituanica 6: 45–65

SPECIES INFORMATION SHEET *Podiceps grisegena* (wintering)

English name: **Red-necked grebe**	Scientific name: ***Podiceps grisegena* (wintering population)**	
Taxonomical group: Class: Aves Order: Podicipediformes Family: Podicipedidae	Species authority: Boddaert 1783	
Subspecies,Variations,Synonyms: *Podiceps grisegena grisegena*	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Intensive fish farming (F01.01), Human disturbance (G01) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Intensive fish farming (F01.01), Human disturbance (G01) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria: **A2b, C1**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Not included in annexes	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, article 4.2)* Denmark: LC (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: NT, Finland: LC, Germany:"strictly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/*(Not threatened), Latvia: –, Lithuania: 3 (R, Rare), Poland: –, Russia: –, Sweden: LC (breeding)		

Range description and general trends

The red-necked grebe has a holarctic distribution with two disjunct subspecies in the West Palearctic and East Palaearctic / North America. In the Western Palearctic, breeding is concentrated in areas stretching from Eastern Europe to West Siberia, with wintering areas along coastal NW Europe as well as in the Black, Mediterranean and Caspian Seas. Most red-necked grebes winter in marine and brackish areas and only low numbers occur inland. Major wintering sites are in the Baltic Sea, in the North Sea (especially off SW Denmark), on the Swedish west coast and along the Atlantic coast of Central Norway (Mendel et al. 2008). The NW European winter population was estimated at 42 000 to 60 000 birds (Wetlands International 2012).

Distribution and status in the Baltic Sea region

The Baltic Sea is the most important wintering area of red-necked grebes in NW Europe. Autumn migration to the wintering areas in the Baltic peaks in October while spring migration takes place from Mach to the beginning of May (Skov et al. 2011). Red-necked grebes mainly winter in the southern and western parts of the Baltic Sea, with most important areas in the north-western Kattegat and an in the Pomeranian Bay. Compared to the early 1990s, no Red-necked birds were observed in the Gulf of Riga in 2007–2009 (Fig. 3). The most important wintering area in the north-western Kattegat as described by Durinck et al. (1994) has not been investigated by ship-based surveys, which are necessary to cover this species, during the second comprehensive survey in 2007–2009 (Skov et al. 2011). However, in winter 2007/2008, 183 red-necked grebes were reported for Danish waters, including the Kattegat area, by Petersen et al. (2010). As this figure is based on aerial counts only, numbers are probably

underestimated. Thus, the Kattegat area is assumed to still be an important wintering area of red-necked grebes, although numbers may be lower compared to the early 1990s. According to Skov et al. (2011), overall numbers wintering in the Baltic Sea declined from c. 5 500 in 1988–1993 to 770 birds in 2007–2009, equivalent to 86% over 16 years.

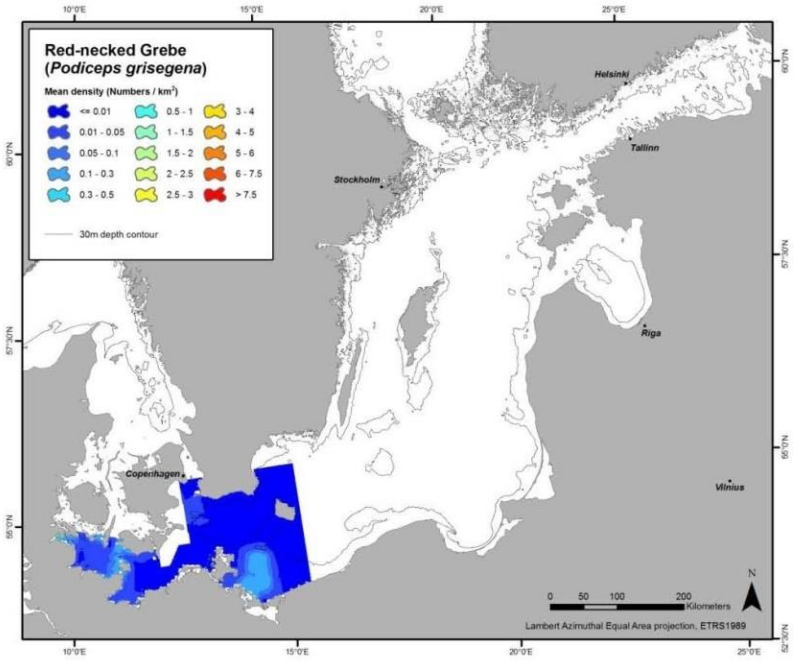

Fig. 3. Distribution and density of wintering red-necked grebes (*Podiceps grisegena*) in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and Ecology

During the non-breeding season, red-necked grebes predominantly occur in marine and brackish waters and are only occasionally found on inland lakes (Mendel et al. 2008). At sea, the birds favour shallow coastal and offshore waters above bottoms of sandy or gravely sediments, interspersed with large atones and patches of seaweed (Fjeldså 2004). In the Baltic Sea they are most numerous in areas up to 20 m depths (Sonntag 2009, Skov et al. 2011). The food in the wintering areas mainly consists of small fish, supplemented by invertebrates. Young birds are often found foraging commensally with scoters, *Melanitta* spec. (Fjeldså 2004). In the Pomeranian Bay, demersal gobies are the main prey species of red-necked grebes (Sonntag 2009).

Description of major threats

Beside threat factors in the breeding areas, like the intense use of water bodies for **freshwater fisheries** (causing **deterioration** of **water quality**, **eutrophication, diet competition** with fish species and **degradation** and **loss** of **breeding habitats)** and **disturbances** near the nesting sites due to recreational activities (see Bauer et al. 2005), various pressures in the wintering areas were identified that have possibly contributed to the observed declines in the Baltic Sea winter population:

In the Baltic wintering areas, intense **gillnet fisheries** impose a high risk of **entanglement** and **drowning** for diving bird species. In the Pomeranian Bay, an important wintering area of red-necked grebes, intense set net fisheries are operated in the coastal zones as well as offshore and overlap with the resting and feeding areas of red-necked grebes. Hence, the birds are particularly susceptible to becoming entangled in the nets while diving for their preferred prey near the sea bottom. According to Zydelis et al. (2009), tens to hundreds of red-necked grebes are caught annually in gillnets in the Baltic

Sea, especially in Poland and Germany. During winter, red-necked grebes spend large proportions of time swimming on the water. Besides, they are often concentrated in specific areas, like in the Pomeranian Bay, which renders them highly vulnerable to **oil pollution** in this area (Mendel et al. 2008). The **disturbance** distance of red-necked grebes with regard to **vessels** is moderate. The birds either take flight, mostly at a short distance to an approaching ship, or may swim or dive to escape from a vessel (Garthe et al. 2004, FTZ Büsum unpubl. data). However, such forced responses may cause the birds to avoid shipping lanes and may cause fragmentation and loss of suitable feeding and resting habitats. In their wintering areas at sea, red-necked grebes mostly move by swimming, but between different resting sites the birds move mostly by flying. Migration movements usually occur at dawn, night and dusk, and the species has only low flight manoeuvrability. Hence, red-necked grebes are particularly at risk of **colliding** with **offshore wind turbines** and **other obstacles**, especially in unfavourable conditions with poor visibility. The species scores high in the wind farm sensitivity index (Garthe & Hüppop 2004). In the Pomeranian Bay, red-necked grebes feed mostly on benthic organisms that occur on sandy or gravely sediments (Sonntag 2009). Thus, the **reduction** or **destruction** of such **bottom habitats**, e.g. by sand and gravel extraction or by dredging activities for shipping channels and coastal development may decrease the food availability for the species.

Assessment justification

According to Skov et al. (2011), numbers of red-necked grebes wintering in the Baltic Sea decreased by 86% compared to numbers in 1988–1993 (Durinck et al. 1994), equivalent to a three generation decline of 84% (GL=5, M. Tjernberg, written). The species would thus classify as *Critically Endangered* (CR) according to criterion A2, as the causes of the reduction are not yet understood and the reduction may not have ceased. However, part of this decline is caused by the lack of available data from several important Danish areas, most notably the northwestern Kattegat, where more than 2,300 birds were recorded in 1988–1993. Those areas have not been investigated by ship-based surveys, which are necessary to cover this species (Skov et al. 2011). In winter 2007/2008, 183 red-necked grebes were reported for Danish waters, including the Kattegat area, by Petersen et al. (2010). These birds are considered to occur mainly in Baltic Sea areas. Adding 183 birds to the Baltic Sea population would reduce the population decrease to 81%, but still classify the species as Critically Endangered. However, the figure presented in Petersen et al. (2010) is based on aerial counts only and numbers might thus also be underestimated. For German waters, winter population size for the period 2000–2007 is estimated to be 750 individuals (Mendel et al. 2008), which is higher than the number given by Skov et al. (2011) for German areas, but the winter population declined by 89% in the period 1989–2010 (J. Wahl, written). In the Central Baltic and Estonia, population trends are increasing (Skov et al. 2011). The HELCOM CORESET trend data for the period 1991–2001 revealed a stable trend of the species, but this figure is based on coastal counts only and might thus be inappropriate for red-necked grebes that also occur offshore. Assuming that numbers might be somewhat underestimated by Skov et al. (2011), the population decrease in the Baltic Sea is supposed to be lower than 80% (but higher than 50%), and the species is classified as *Endangered* (EN) according to criterion A2b. In addition, the species classifies as *Endangered* under criterion C1 due to the small population size of less than 2 500 individuals in combination with a declining population. However, if the population will decline further, the species will soon need to be upgraded to Critically Endangered.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. In the wintering areas, reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options that are likely to support the recovery of this species.

SPECIES INFORMATION SHEET *Podiceps grisegena* (wintering)

Common names

Denmark: gråstrubet Lappedykker, Estonia: hallpõsk-pütt, Finland: härkälintu, Germany: Rothalstaucher, Latvia: pelēkvaigu dūkuris, Lithuania: rudakaklis kragas, Poland: perkoz rdzawoszyi, Russia: Серощекая поганка, Sweden: gråhakedopping

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SPECIES INFORMATION SHEET — *Polystica stelleri* (wintering)

English name: **Steller´s Eider**	Scientific name: ***Polysticta stelleri* (wintering population)**	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Pallas, 1769	
Subspecies, Variations, Synonyms: –	Generation length: 7 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Extra-regional threats (XO) Wintering: Alien species (I01), Bycatch (F03.02.05), Oil spills (H03.01), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Extra-regional threats (XO) Wintering: Alien species (I01), Bycatch (F03.02.05), Oil spills (H03.01), Water traffic (D03.02)	
IUCN Criteria: **A1a, B2ab(ii,iv,v), C1,2a(ii).**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category VU / LC	EU Birds Directive: Annex I	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: –, Estonia: EN, Finland: –, Germany: "particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: – , Russia: – Sweden: –		

Range description and general trends

Steller´s eider breed along the arctic coast of Alaska and in the Siberian part of the Russian Arctic, from Yamal Peninsula to the Kolyma Delta. A few birds breed in European Russia and possibly in northern Norway. Birds breeding east of the Khatanga Gulf, Russia, winter in the Bering Sea. In the western part of its range, Steller's eiders winter in the eastern, ice-free part of the Barents Sea, i.e. along the Murman coast / Kola Peninsula (Russsia) and along the coastline of Finnmark (Varangerfjord, Norway), as well as in the White Sea and in the Baltic Sea (Bauer et al. 2005, Aarvak et al. in press.). The number of steller´s eiders wintering in the Western Palearctic has been estimated at 10 000–15 000 birds and the population has been in decline since the early 1990s, with an annual rate of 15% between 1996 and 2003 (Žydelis et al. 2006). However, more recent surveys covering also the Russian wintering areas indicated a major shift in the winter distribution of this species. While numbers in the Varangerfjord and in the Baltic Sea markely decreased, they increased along the northern Russian coast, with about 85% of Steller´s eider are now wintering in Russia. For the year 2009. the total number of Steller's eider wintering in the Western Palearctic was estimated at c. 27 000 birds, similar to numbers found during the last comprehensive survey in the mid-1990 (Aarvak et al. in press.).

Distribution and status in the Baltic Sea region

Steller´s eiders begin to arrive in the Baltic Sea in October and November and numbers gradually increase during winter. Most birds leave the Baltic Sea in mid-April to early May. In the early 1990s, the most important wintering areas were the west coast of Saaremaa Island (Estonia), the sea off Palanga on the Lithuanian coast and the Åland archipelago (Finland). Other wintering areas were found along the coasts of Öland and Gotland, at the west coast of Hiiumaa Island (Estonia) and along the coast of Estonia and Poland. With 46% of the total north-west European winter population, the Baltic Sea and especially the west coast of Saaremaa Islands was of global importance for the species (Durinck et al. 1994). During the second survey 2007–2009, Steller´s eiders were only recorded in three locations, i.e. along the west coasts of Saaremaa and Hiiumaa Islands, the sea off Palanga and in the Archipelago Sea (Fig. 4). The reduction in numbers was especially evident in the latter two areas, but the absence of birds wintering outside the three locations was also remarkable (Skov et al. 2011). Overall numbers wintering in the Baltic Sea decreased from c. 6 850 birds in 1988–1993 to 2 300 birds in 2007–2009 (Durinck et al. 1994, Skov et al. 2011). According to Žydelis et al. (2006), the Baltic winter population was declining by an estimated 13% per year between 1994 and 2003. The winter population for Estonia was estimated at 1 000–1 500 birds by Elts et al. (2009), with a moderate decrease of 10–50% since the beginning of the 21th century. Currently, Aarvak et al. (in press) named 1 000 individuals for Estonia. In Lithuania, numbers declined by 22% during 1996–2003 (Žydelis et al. 2006). In winter 2011/2012, maximal four birds were observed along the Lithuanian coast (R. Žydelis, pers. comm.). In Finland, the number of wintering birds was estimated at 20–40 individuals for the period 2007–2011, with decreasing trend since the year 2000 (M. Hario, pers. comm.)

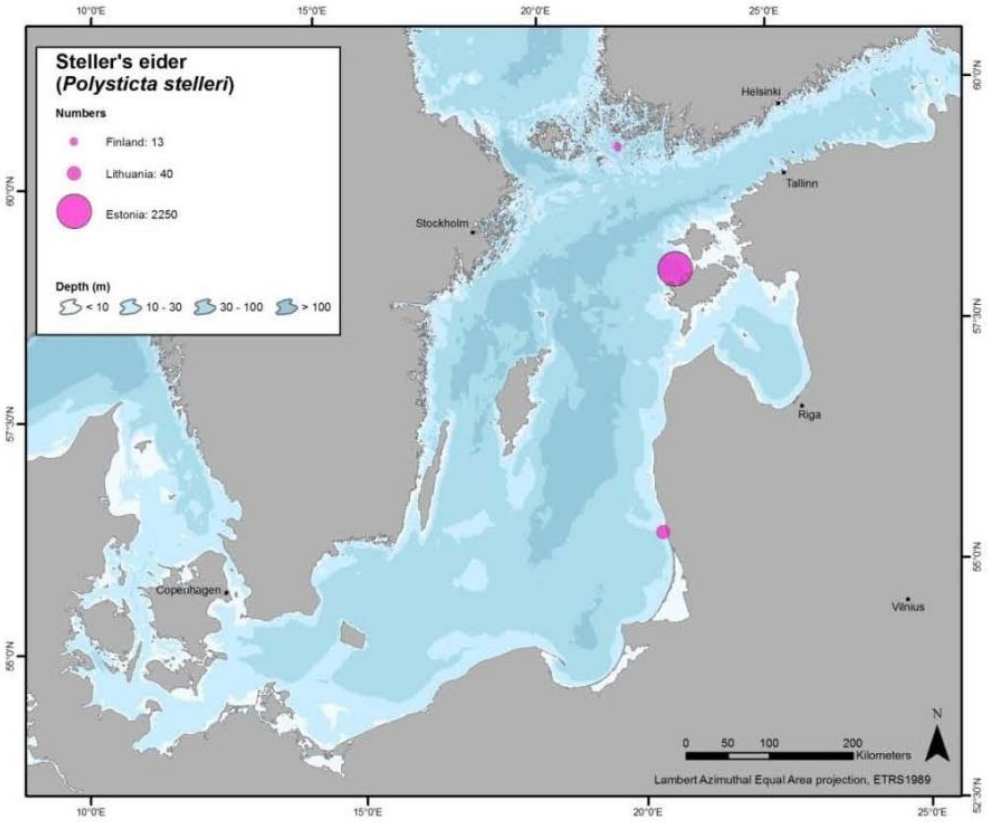

Fig. 4 Distribution and numbers of wintering steller´s eider *Polysticta stelleri* in the Baltic Sea, 2007–2009. From Skov et al. (2011).

SPECIES INFORMATION SHEET *Polystica stelleri* (wintering)

Habitat and Ecology

Steller´s eiders winter mostly at sea, along rocky coasts, in bays and ricer mouths (del Hoyo et al. 1992). In the Baltic Sea, they prefer to winter in shallow areas close to the coast, in waters of less than 10 m depth (Skov et al. 2011). Wintering Steller´s eiders often form dense flocks of several hundred birds (Durinck et al. 1994). During the winter season, the species shows a highly clumped distribution, and Žydelis et al. (2006) assumed that this reflects its specialised habitat use and diet. Birds wintering in the Varangerfjord mainly fed on gastropods, bivalves and crustaceans. Most of the prey items were of species known to be associated with kelp plants, suggesting that Steller's eiders obtain a large proportion of their prey directly from the vegetation (Bustnes et al. 2000). Birds wintering in Lithuanian waters of the Baltic Sea mainly fed on *Gammarus* crustaceans and Blue Mussel, while herring eggs were an important prey item in spring. Steller's eiders altered their habitat use during herring spawning season, moving to habitats where fish spawning occurred (Žydelis & Esler 2005).

Description of major threats

As indicated by current investigations of Aarvak et al. (in press) the marked declines of birds wintering in the Baltic Sea are probably a result of a major shift in the winter distribution to arctic Russian waters. The reasons for this distribution shift are not yet understood. However, preliminary data from benthos research in Lithuania suggest that the invasive Round Goby (*Neogobius melanostomus*) may be responsible for a dramatic decrease in the biomass of Blue Mussels (*Mytilus edulis*) along the Palanga coast, a formerly important wintering area for steller´s eider, from which the species has almost completely disappeared. Although not yet proven, **food competition by Round Gobies** may impose a threat on steller´s eider and deteriorate the conditions for birds wintering in the Baltic Sea (M. Dagys, written). Besides, the survival of Steller´s eider in the Baltic Sea wintering areas could be affected by the following factors:

Intense gillnet fisheries in the Baltic Sea impose a high risk of entanglement and drowning for diving bird species. Seaducks are among the species most seriously affected by **mortality in gillnets**, as the nets are mainly set in coastal areas and on shallow offshore banks, which are also the most important habitats for species like steller´s eider. A study undertaken in 2000/2001 in Estonia showed that gillnets might cause moderate bycatch mortality among steller's eiders, with the number of victims estimated at 10–50 birds per winter (Žydelis et al. 2006). Along the Lithuanian coast, the commercial gillnet fishery has become very intensive in the wintering areas of Steller's eider since the mid-1990s. Since 1997, up to 20 drowned birds have been obtained from fishermen each year and up to 10 individuals have been collected annually during beached bird surveys and identified as gillnet victims. Estimates suggest that the number of birds drowning in fishing nets per winter could be as high as 10% of birds wintering in the area (Žydelis et al. 2006). Besides, **disturbance** of birds caused by commercial gillnet fishery activities in shallow nearshore waters could also be considered as a factor limiting the availability of suitable habitats to Steller's eiders (Žydelis et al. 2006). The species is likely to be sensitive to disturbances by **ship traffic**, as other sea duck species have been described to exhibit very large disturbance distances to approaching ships and to suffer from habitat loss or habitat fragmentation due to ship traffic (e.g. Bellebaum et al. 2006, Kaiser et al. 2006, Schwemmer et al. 2011). Steller´s eiders spend large amounts of time swimming on the water and often do so in large flocks. Thus, they are highly vulnerable to **oil pollution**. Marine oil pollution is a potential but major threat to Steller's eiders wintering in Estonian and Lithuanian waters. Although a few moderate oil spill incidents have occurred in the proximity of Steller's eider wintering sites during recent years, no mass mortality of this species due to oiling has been recorded so far (Žydelis et al. 2006).

Assessment justification

The two comprehensive Baltic surveys indicated that the population of Steller´s eider wintering in the Baltic Sea declined from c. 6 850 birds in 1988–1993 to 2 300 birds in 2007–2009, equivalent to a decline of 76% over three generations (1993–2014, 21 years; GL=7, M. Tjernberg, written). This qualifies the

species for *Endangered* (EN) under criteria A2. However, according to Aarvak et al. (in press), the declines of birds wintering in the Baltic Sea are probably a result of a major shift in the winter distribution to arctic Russian waters and thus conditions outside the Baltic Sea are likely to improve. Thus, the reason for the decline seems to be understood and reversible and criterion A1b (rather than A2b) would apply, but the species would still classify as *Endangered*. Besides, it is unclear whether additional, human-induced mortality e.g. by drowning in fishing nets may have contributed to the decline or further threatens the remaining winter population in the Baltic Sea. As it is not clear whether the conditions in the Baltic are improving or deteriorating and whether the relative small European breeding population will be able to rescue the regional population should it decline, the species was not downgraded. Currently, Steller´s eiders wintering in the Baltic Sea were found in only three areas, with 98% of all birds wintering along the coast off Saaremaa Island, Estonia (Skov et al. 2011). Thus, due to the restricted area of occupancy, the low number of wintering locations and the small population size of birds currently wintering in the Baltic Sea (<2 500), the species also classifies as *Endangered* under criterion B2ab(ii,iv,v) and C1,2a(ii).

Recommendations for actions to conserve the species

Reducing bycatch in fishing gear by regulations of gill net fisheries in the key areas, the prevention of accidental and chronic oil pollution and the preservation of undisturbed feeding grounds are some options to prevent additional mortality or disturbance of birds wintering in the Baltic Sea. Research should focus on the further spread of Round Goby in the eastern Baltic Sea area, as this invasive fish species, which may be responsible for a depletion of Blue Mussel beds and thus the disappearance of steller´s eider along the Palanga coast, is likely to eventually reach the last important wintering areas of steller´s eider along the west coast of Saarema and Hiiumaa Islands in Estonia (M. Dagys, written).

Common names

Denmark: stellersand, Estonia: kirjuhahk, Finland: allihaahka, Germany: Scheckente, Latvia: stellera pūkpīle, Lithuania: sibirinė gaga, Poland: birginiak, Russia: Сибирская гага, Sweden: alförrädare

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SPECIES INFORMATION SHEET

Rissa tridactyla

English name: **Black-legged kittiwake**	Scientific name: ***Rissa tridactyla***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae	Species authority: Linnaeus, 1758	
Subspecies,Variations,Synonyms: *Rissa tridactyla tridactyla*	Generation length: 9 years	
Past and current threats (Habitats Directive article 17 codes): Breeding / wintering: Fishing (F02.02.02), Climate change (M), Mining and quarrying (C01.01), Oil spills (H03.01), Litter (H03.03), Bycatch (F03.02.05), Random threat factors (U)	Future threats (Habitats Directive article 17 codes): Breeding / wintering: Fishing (F02.02.02), Climate change (M), Mining and quarrying (C01.01), Oil spills (H03.01), Litter (H03.03), Bycatch (F03.02.05), Random threat factors (U)	
IUCN Criteria breeding: **D1**	**HELCOM Red List Category breeding:**	**EN Endangered**
IUCN Criteria wintering: **D2**	**HELCOM Red List Category wintering:**	**VU Vulnerable**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Not included in annexes	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, article 4.2)* Denmark: NT, Estonia: –, Finland: –, Germany:"particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/R (Extremely rare), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: EN (breeding)		

Range description and general trends

The black-legged kittiwake (*Rissa tridactyla*) has a circumpolar distribution and mainly breeds on low and high arctic coasts. The East Atlantic population has increased in numbers, and also the range has expanded to the eastern North Sea including the northern Kattegat during the 20th century. The East Atlantic population is large (6.6 million individuals, Wetlands International 2012), the European breeding population was estimated at 2.1–3.0 million birds, with largest colonies on Iceland, in Norway and in Great Britain (BirdLife International 2004). There was a moderate increase in the breeding population of this species in the North-East Atlantic area over the period 1970–1990. However, from 1990–2000 the species declined in Greenland, Norway and the UK by 20–29%, and suffered a moderate decline (>10%) overall in Europe (Heubeck 2004; BirdLife International 2004). In Norway, the breeding population has declined strongly (50–80%) since 1980 and the species has been classified as EN in the Norwegian Red List 2010.

In the south-eastern North Sea, the closest breeding sites of the kittiwake to those in the Kattegat are found in north-west Denmark and on Helgoland (Germany). At the Danish North Sea, the most important breeding site is Bulbjerg rock in the Jammerbugt, which was colonised in 1979 and hosted up to 800 bp. Smaller numbers of kittiwakes have also bred in recent times on Hanstholm Havn, Hirtshals Havn and Rudbjerg Knude. The colony on Helgoland comprises a stable population of 7 000–8 000 bp (Mendel et al. 2008). Outside the breeding season the species occurs widely dispersed throughout the North Sea and the North Atlantic west to North America and south to the Mediterranean Sea. Only a low number of immature birds migrate further south to Africa. Kittiwakes are regularly found in the Baltic Sea, with abundances decreasing towards the east (Bauer et al. 2005, Mendel et al. 2008).

SPECIES INFORMATION SHEET *Rissa tridactyla*


Rissa tridactyla, adult bird (left, photo by Kai Gauger) and immature bird (right, photo by Christoph Moning).

Distribution and status in the Baltic Sea region

Breeding

The Baltic Sea population of the black-legged kittiwake represents the edge of the East Atlantic population. It has always been small and about stable during the last 20 years. In **Sweden**, the species started to breed in 1967. It reached a maximum of 60 bp in the 1970s, but dropped down to 25–35 bp at the beginning of the 1980s and has remained stable on this level since then (Tjernberg & Svensson 2007).

The black-legged kittiwake bred in the **Danish** part of Kattegat between 1941 and 1988, when the last colony on Nordre Rønner was abandoned. An occasional breeding has been recorded later in 1995.

Table 1: Population numbers of the black-legged kittiwake in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing.

Country	Breeding pairs				Short-term population trend (10 years)	Long-term population trend (50 years)
	1980	1990	2000	2009		
Denmark	105	-	-	-		-
Sweden	60	29	30	36	0	+
Baltic Sea	**165**	**29**	**30**	**36**		

Wintering

The only wintering area of black-legged kittiwakes in the Baltic Sea is the Kattegat. High numbers are concentrated around Middelgrundene (Fig. 7), which represents the most important winter area in the eastern North Sea - Kattegat region (Durinck et al. 1994). For the winter periods 1988–1993 an average number of 79 000 wintering birds was given for the Kattegat area, but numbers strongly fluctuated between years. In 1988, 325 000 kittiwakes were counted, whereas almost no birds were observed in 1992 and 1993 (Durinck et al. 1994). Birds wintering in the Kattegat mainly originate from British colonies. They begin to move from the Skagerrak to the northern Kattegat in June and July. However, the majority of birds arrive between August and November. Return movements to the Skagerrak and the North Sea take place from late January to late February (Durinck et al. 1994). Apart from Durinck et al. (1994), information about the Kattegat winter population is scarce and current numbers are poorly known. Aerial midwinter surveys in the Kattegat area resulted in 597 birds in 2004 and 610 birds in 2008 (Petersen et al. 2006, 2010).

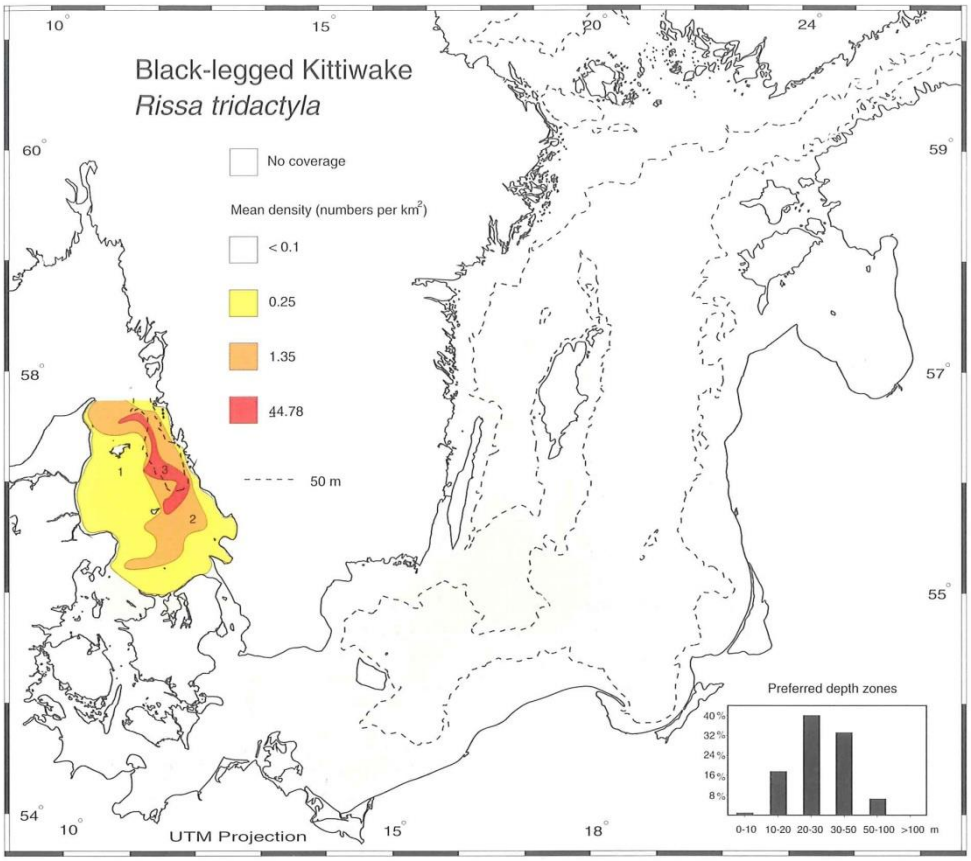

Fig. 7. Distribution and density of wintering black-legged kittiwakes (*Rissa tridactyla*) in the Baltic Sea, 1988–1993. The histogram shows the proportion of birds recorded in different depth zones during the surveys. From Durinck et al. (1994).

Habitat and Ecology

The black-legged kittiwake is a highly pelagic species that only comes ashore for breeding. It breeds in colonies on steep, coastal cliffs or on islands, but also on towers and roofs. The birds breeding in the Baltic Sea area are found on roofs of lighthouse buildings. The foraging range during the breeding season is strongly influenced by food availability and changes in the distribution of pelagic shoaling fish which are favoured as prey. Outside the breeding season, kittiwakes are widely dispersed at sea. In the North Sea, salinity and frontal systems were found to exert a strong influence on the at-sea distribution of the species (Markones 2007). Kittiwakes have often been observed to consume discards and offal from fishing vessels (see Mendel et al. 2008).

Description of major threats

Since there is only one breeding site of the black-legged kittiwake in the Baltic Sea area (Nidingen / Kungsbacka Fjord, Sweden), the occurrence of the species in the Baltic Sea area is vulnerable to random threat factors which may affect the breeding site itself or the vicinity (e.g. food availability in the surrounding water areas). Furthermore, *Rissa tridactyla* is threatened by **reductions in the availability of small pelagic shoaling prey fish**, which maybe affected directly or indirectly by human activities (e.g., industrial sandeel fishery; Frederiksen et al. 2004). Sandeel larvae are strongly related to plankton abundance, and the plankton is influenced by surface water temperature. Hence, **climate change** is also a factor likely to affect the population (OSPAR 2009). Furthermore, the **reduction or destruction of bottom habitats** of sandeels, e.g. by sand and gravel extraction or by dredging activities for shipping

channels and coastal development, may decrease the food availability for the species. Despite the fact that **bycatch** of *Rissa tridactyla*, especially by **longline fisheries**, has largely be reduced in recent times by adequate protection of the hooks, there are still considerable numbers of birds killed as bycatch. Besides, birds can get entangled in surface-drifting gill nets. The species is also reported to be threatened by **marine oil spills** and **chronic oil pollution** (OSPAR 2009), as they spend large amounts of time swimming on the waters and sometimes form large flocks near the breeding colonies. Another threat is imposed by **plastic litter**, which the birds may use for nest construction (e.g. Heckroth & Hartwig 2005, Hartwig et al. 2007). Chicks and adults may entangle in the plastic or die by ingestion of plastic particles.

Assessment justification

Breeding

The breeding population of black-legged kittiwake in the Baltic Sea area is classified as *Endangered* (EN) according to criterion D1. The breeding place in the Baltic Sea area represents the edge of the East Atlantic biogeographic population, which has a population size of 8.4 million individuals and is classified as *Secure* by Wetlands International (2006). However, the category of the Baltic Sea population is not downgraded on the basis of the large East Atlantic population, since the species has declined strongly in neighbouring areas in Norway (50–80%) since 1980 and has been classified as *Endangered* in the latest Norwegian Red List (2010) and the East Atlantic population is recently categorized as *decreasing* by Wetlands International (2012).

Wintering

Population size and trends of the winter population in the Kattegat are poorly known. In UK colonies, where most of the Kattegat birds originate from, breeding numbers increased by around 24% between the late 1960s and the mid-1980s, but have decreased by 25% from 1985–88 to 1998–2002 and by 41% in the period 2000–2011. Given recent repeated years of low productivity and survival, it is likely that declines will continue (JNCC 2012). However, it is difficult to assess to what extend these declines effect the winter population in the Kattegat. Thus, it is unclear whether the species approaches the threshold of a threat category according to criteria A and C. As the winter distribution is restricted to the Kattegat area of the Baltic Sea, the species would apply for *Near Threatened* (NT) under the range size criterion B (> 40 000 km²), but it is not clear whether two of the other conditions (declining or fluctuating range size, habitat extent/quality, or population size) are fulfilled. However, due to the low number of wintering locations (probably < 6, see Durinck et al. 1994), there is an imaginable threat that can make the species capable of becoming CR or RE within a very short time, e.g. an oil spill near Middelgrundene, where >85% of the winter population occur (see Durinck et al. 1994). Accordingly, the species is classified as *Vulnerable* (VU) under criterion D2, as long as no other information on population size and population trends exists. The species is not downgraded due to the large Atlantic population, since it is declining strongly in Britain and Norway since the 1980s, and the East Atlantic population is considered *decreasing* by Wetlands International (2012).

Recommendations for actions to conserve the species

Since the Baltic Sea population of *Rissa tridactyla* represents only a small outpost of the large Atlantic population, conservation actions for this species are not a priority. The only currently existing breeding place at Nidingen (Sweden) should be protected. Furthermore, former breeding sites in the Danish Kattegat should be conserved and kept suitable for re-colonisation. Measures to reduce bycatch losses in longline fisheries and measures to reduce oil pollution should be implemented or enforced in both the Atlantic and Baltic range of the species. Efforts to reduce plastic litter in the marine environment will also be beneficiary for the species.

SPECIES INFORMATION SHEET *Rissa tridactyla*

Common names

Denmark: ride, Estonia: kaljukajakas, Finland: pikkukajava, Germany: Dreizehenmöwe, Latvia: trīspirkstu kaija, Lithuania: tripirétis kiras, tripirštis kiras, Poland: mewa trójpalczasta, Russia: Обыкновенная моевка, Sweden: tretåig mås

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SPECIES INFORMATION SHEET *Somateria mollissima*

English name: **Common eider**	Scientific name: ***Somateria mollissima***	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies,Variations,Synonyms: *Somateria mollissima mollissima*	Generation length: 7 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Epidemics/Diseases (K03.02, K03.03), Alien species (I01), Climate change (M01, M02), Competition and predation (K03.04, I02) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Hunting (F03.01), Extra-regional threats (food shortage in North Sea, XO), Human disturbance (G01.01), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Epidemics/Diseases (K03.02, K03.03), Alien species (I01), Climate change (M01, M02), Competition and predation (K03.04, I02) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Hunting (F03.01), Extra-regional threats (food shortage in North Sea, XO), Human disturbance (G01.01), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria breeding: **A2abe**	**HELCOM Red List Category breeding:**	**VU Vulnerable**
IUCN Criteria wintering: **A2b**	**HELCOM Red List Category wintering:**	**EN Endangered**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex II B (DK, EE, FR, IE, FI, SE), Annex III B	
Protection and Red List status in HELCOM countries: *Hunting not allowed in all EU Member States (Annex II B).* Denmark: LC (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: NT, Finland: NT, Germany:"particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/*(Not threatened), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT (breeding)		

Range description and general trends

The common eider (*Somateria mollissima*) breeds in coastal areas of north-west and northern Europe. The population has increased almost throughout the 20th century until the 1990s. Simultaneously, the species has also extended its breeding range southwards along the European Atlantic coast. However, since the mid-1990s a considerable decline of the breeding population has been observed in the northern Baltic (Finland, Sweden, Estonia). Common eiders are partially migratory and dispersive and winter mainly in marine or brackish areas. Successful adaptation to arctic conditions enables wintering displacement mostly within the breeding range. In Central Europe, common eiders overwinter in their breeding areas or show various migration patterns, depending on the area of origin (BWPi 2004, Mendel et al. 2008). The main wintering areas are in the Baltic Sea, along the west coast of Norway and in the Wadden Sea. The Baltic/Wadden Sea flyway population that mainly breeds in Finland, Sweden, Denmark and Estonia winters in the Inner Danish waters, the German Baltic Sea areas and in the Wadden Sea. The winter population has undergone a considerable decline of 36% from c. 1.2 million birds in 1990 to c. 760 000 birds in 2000, but was currently estimated at c. 976 000 individuals (Ekroos et al. 2012, Wetlands International 2012).

SPECIES INFORMATION SHEET *Somateria mollissima*


Somateria molissima. Photos by Ritzel Lutz (left) and Nicole Sonntag (right).

Distribution and status in the Baltic Sea region

Breeding

The ***Swedish*** breeding population was estimated at 170 000 breeding females in 1973 and increased to 270 000 in 1983–1984 (Desholm et al. 2002). Since the end of the 1990s, the population has been declining. Currently, it is estimated at 120 000–200 000 breeding females (bf). Within the last 20 years the decline has been estimated to 25%.

In ***Finland***, the common eider was few in numbers in the 1910s and 1920s, but in the late 1930s the population was already estimated at 12 000 pairs. During World War II the population collapsed due to intensified hunting, egg collection, oil disasters as well as severe winters. After the war the population started to grow again with high growth rates.

The increase was most rapid during the 1970s and 1980s, averaging 7–10% per year. In 2001, the total Finnish population was estimated at 150 000–180 000 breeding females, of which about 150 000 bred in the south-western archipelago, 10 000–20 000 in the Gulf of Finland, and less than 10 000 in the Bay of Bothnia.

During the late 1980s and 1990s, no further increase occurred in the Gulf of Finland, and since the mid-1990s the entire Finnish population is estimated to decline. For 2010, the population number was estimated at 103 000 breeding females, and the recent decline (2000–2010) to 2.3% p.a.

In the ***St Petersburg region of Russia*** the species recovered during the 1970–90s. However, the population is still small and is estimated at 200 breeding females on the islands of the eastern part of the Gulf of Finland (A. Kondratyev, *in litt*.). At Lake Ladoga, the eider breeds in the Valaam archipelago and on small islands in the northern part of the lake. However, these areas belong to Karelia, not to St Petersburg region.

In ***Estonia***, the common eider is the second numerous duck species, breeding all over the archipelago. The population increased from the beginning of the century until 1940. During World War II and the post-war period the population decreased, but began to recover and expand its range in the mid-1950s. In the mid-1960s, the population was estimated at 3 000–3 500 breeding females, until the beginning of the 1980s it had increased to about 8 000, and *c.* 15 000 in 1995. However, after this peak it decreased to 12 000 in 2001 (Desholm et al. 2002, Elts et al. 2003; Fig. 5), and 3 000–7 000 breeding females in 2003–2008 (Elts et al. 2009).

In the **Kaliningrad region of Russia, Lithuania** and **Latvia** the eider has not yet been recorded as a breeding bird.

In ***Poland***, the breeding of eiders is exceptional, there has been only one breeding record near Gdańsk in 1997 (Tomiałojć & Stawarczyk 2003).

In ***Germany***, the eider mainly breeds at the North Sea (1 100–1 300 bf in 2005, Südbeck *et al.* 2009). The

German Baltic Sea coast was not colonized before 1985. Since then, the eider breeds regularly there with increasing numbers in both Baltic coastal federal states, Mecklenburg-Western Pomerania and Schleswig-Holstein. In 2011, the population in Mecklenburg-Western Pomerania was 85–100 bf.

In ***Denmark***, the eider has shown a long-term increase during the 20th century. The breeding population was about 1 200–1 500 nesting females around 1935, 3 000–3 500 around 1960, 19 000–20 000 around 1980, and 23 000–25 000 around 1990. The annual growth rate was as high as 8–10% during the period 1960–1980, but slowed down to 2–3% in 1980–1990 (Lyngs 2000). During the 1990s until 2010, the population was about stagnant, giving an estimate of 24 000–25 000 breeding females in 2010 (Christensen & Bregnballe 2011; Fig. 5). However, the stability of total numbers does not reflect a stable situation, since some old, large colonies decreased considerably, whereas increases occurred on a number of small and newly established breeding sites. On Ertholmene (Bornholm), for instance, one of the largest and oldest eider colonies in Denmark, the number of nesting females dropped down from 3 000 in 1992 to 1 650 in 2007 (http://www.chnf.dk/lister/yffugle_chroe.html).

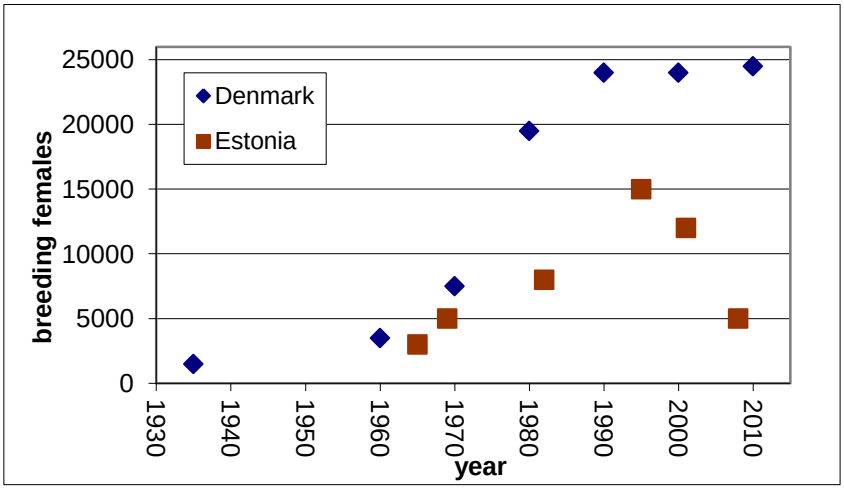

Fig. 5. The development of the eider population in Denmark and Estonia during the 20th century. Data from Desholm et al. (2002) and Christensen & Bregnballe (2011).

Between 1990 and 2000, the Baltic/Wadden Sea flyway population has undergone a considerable decline. In the Danish waters, the second most important wintering area of the flyway population, the number of wintering birds has declined from *c.* 800 000 to 370 000 during this time. Mid-winter counts suggest that the total population could have fallen from *c.* 1.2 million birds in 1991 to *c.* 760 000 in 2000, which means a reduction of 36% (Desholm et al. 2002)

However, although reductions in breeding numbers are evident for some sites, the decline of the breeding population along the flyway seems to be less pronounced compared to the winter population. Shortcomings of the monitoring of breeding and wintering numbers, as well as an unknown buffering effect of non-breeders (*i.e.* earlier debut breeding attempt of subadults) are probably the reasons for the difference (Desholm et al. 2002). However, Finnish ringing data indicate no age-related buffering effect, whereas there was a true shortcoming of subadults in the south due to exceedingly small cohorts on the northern breeding grounds preceding the low winter counts in Denmark (Hario & Rintala 2009).

Table 1: Population numbers of the common eider in the Baltic Sea area (numbers refer to breeding

females). For population trends 0=stable, -=decreasing, +=increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding females	Year		
Sweden	120 000–200 000[1]	2010	-	+
Finland	103 000	2010	-	+
Russia, PET	200	2010	?	+
Estonia	3 000–7 000	2003–2008	-	+
Poland	One breeding record	1997		
Germany, SH	70	2005–2009	+	+
Germany, MV	85–100	2011	+	+
Denmark	24 000–25 000	2010	0	+
Baltic Sea	**250 000–335 000**			

Wintering

Birds breeding in the Baltic region winter mostly in the western parts of the Baltic Sea. Autumn migration from the breeding grounds in the northern and central parts of the Baltic Sea to Danish and German waters begins in late September and lasts through December. Some of these birds spend the first part of the winter in the Wadden Sea, but return to the Baltic in February and March. Spring migration to the breeding grounds begins in late March. Only local breeders remain in Danish and German waters (Skov et al. 2011). At the beginning of the 1990s, the north-western Kattegat was the most important wintering area in the Baltic Sea. Besides, the sea between Funen and the north-east coast of Germany as well as the shallow parts of SW Kattegat were important wintering areas for common eiders (Durinck et al. 1994). Since then, a relocation of wintering birds has taken place. The importance of the north-western and south-western Kattegat declined dramatically, while numbers in the region between Funen and Germany increased. This area is now the most important wintering site in the Baltic Sea (Fig. 6). Thus, a contraction of the distribution of common eiders to the south-western corner of the Baltic Sea has apparently taken place. The total number wintering in the Baltic Sea has declined from 1 048 000 to 515 000 birds, equivalent to 51% over 16 years (Skov et al. 2011).

[1] Numbers include birds breeding in in Bohuslän, Skagerrak.

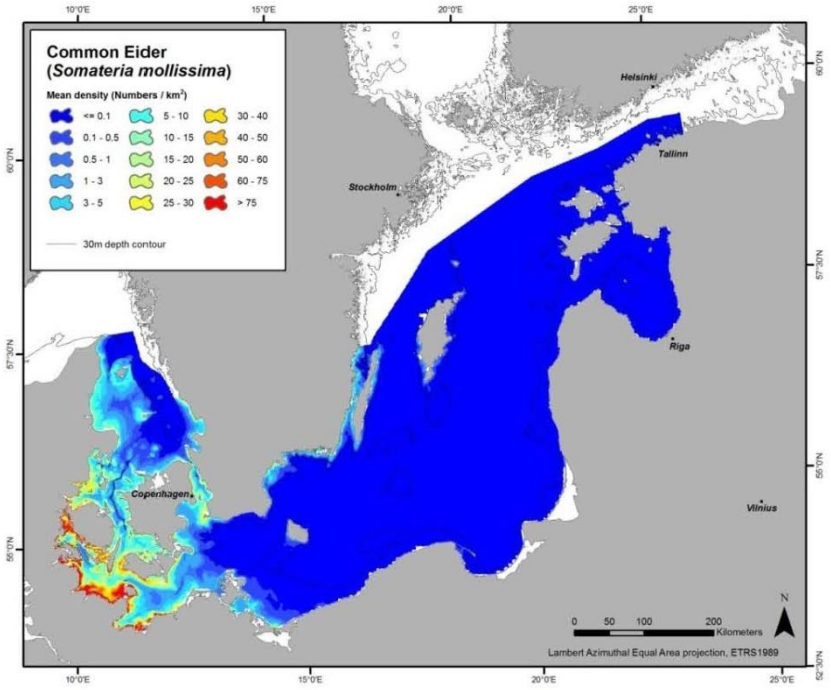

Fig. 6. Distribution and density of wintering common eider *Somateria mollissima* in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and ecology

The common eider is the most numerous and widespread duck in the Baltic archipelagos. It inhabits a wide range of island types along the entire zonation. In Finland, it takes an intermediate position in maritimity among breeding species in the vast South Western Archipelago (Numers 1995), being a generalist rather than a strictly marine species. However, its distribution is basically dependent on the occurrence of the blue mussel (*Mytilus trossulus*), although also other bivalves may serve as a basic food resource. Females show a high degree of natal philopatry, whereas males disperse widely. The eider breeds colonially, often with larids, although true association may be weak (Hildén 1964). The northern Baltic population is strictly migratory, but overwintering takes place within the Baltic range.

During the non-breeding season, common eiders are highly gregarious and sometimes form flocks of several tens of thousands individuals. Winter distribution patterns at sea vary between years, presumably due to fluctuations in food availability. In the Wadden Sea, both sublittoral and eulitoral areas are commonly used, but birds seem to generally favour sublittoral arras during winter (Nehls 1991). In the western part of the Baltic Sea, common eiders occur preferably in areas of a water depth between 5 and 15 m (Skov et al. 2011) and mostly above coarse sediments like gravel or stone. Such hard substrates offer good conditions for blue mussels, the major food source for common eiders.

Description of major threats

There are several factors known to impact the species, but their significance for the observed decline is not well understood.

Diseases and infections can have an impact on common eider populations. Avian cholera, caused by the bacteria *Pasteurella multocida*, has caused mass fatalities in common eiders breeding in the Baltic Sea area, e.g. in Denmark, where an outbreak of avian pasteurellosis in 1996 and in 2001 among wintering and breeding birds caused high mortality in the colonies in SW Kattegat. In Stavns Fjord, more than 85% of the potential breeders were estimated to have died during the outbreak (Christensen et al. 1997).

Besides, common eiders are affected by viral infections and intestinal infections with acanthocephalan parasites. Recently, a lack of thiamine (vitamin B1) was found to cause lethal paralytic syndrome which may contribute to adult morality and breeding failures in several species. Balk et al. (2009) suspected thiamine deficiency to be an important cause of the observed population declines of common eider in Northern Europe. **Climate change** probably also has an increasing effect through decreasing salinity in the Baltic Sea, which affects food availability (bivalves). However, Baltic winter climate has not shown an impact on adult mortality so far, *i.e.* there is no association between the North Atlantic Oscillation (NAO) index and the annual variation in female survival of the Gulf of Finland birds (Hario *et. al* 2009). Fledgling production bears the highest population regulatory effect in a 48-year-long time series in the Gulf of Finland, whereas female survival only explains 2% of the population growth rate (Hario & Rintala 2006, 2009). In 1996 and 1999, viral infections have caused mass mortality among ducklings within the first weeks after hatching. Similar mortalities have occurred in accelerating pace since then, but the causes have not always been identified. Yet, high duckling mortality decreases the subsequent recruitment rate so that it cannot compensate the normal adult mortality (10–15%). The total Baltic – Wadden Sea population shows currently a clear male-biased sex ratio (Kilpi *et al.* 2003, Lehikoinen *et al.* 2008a). This is thought to be due to a long-term and gradual decrease in female survival resulting from complex interactions with increasing **predation** pressure by the recovering population of White-tailed Eagle and by American mink on breeding females (Kilpi & Öst 2002) and elevated susceptibility to pathogens and starvation among female ducklings (Lehikoinen *et. al* 2008b). As common eiders are listed under Annex II of the European Birds Directive, **hunting** is allowed in certain EU countries, and several tens of thousands of birds are shot around the Baltic Sea each year. In Denmark, the estimated annual bag of eiders has partly reflected population trends, increasing to c. 140 000 birds in 1970, after which the number of shot birds fluctuated until the 1990s and then declined to 69 000 individuals in 2004/2005. This decline probably also reflects the continuously decreasing number of hunters since the early 1980s (Bregnballe et al. 2006). Furthermore, Bregnballe et al. (2006) suppose that, by taking high numbers of female birds, the overall impact of hunting on the population might have changed from reducing the rate of annual increase to potentially contributing directly to the decline in breeding numbers in Denmark. Seaducks are among the species most seriously affected by **mortality in gillnets**, as the nets are mainly set in coastal areas and on shallow offshore banks, which are also the most important habitats for species like common eiders. More than 73 000 birds are annually caught in gill nets in the Baltic Sea, with sea ducks forming the majority of victims. Common eiders are amongst the most frequent victims of entanglement in the southwestern part of the Baltic Sea, e.g. in Sweden, Germany and Poland (Žydelis et al. 2009). In the early 1980s the estimated yearly loss of eiders was 9 400 birds for the Baltic coast of Schleswig-Holstein only (Kirchhoff 1982). Common eiders spend large amounts of time swimming on the water and usually form large flocks and concentrate in certain sea areas. Thus, they are highly vulnerable to **oil pollution**. Oiling has been identified as one of the most important threats to seabirds and waterbirds in several Baltic Sea countries and wintering and moulting sea ducks are among the species most seriously affected (Žydelis & Dagys 1997, Mendel et al. 2008). Common eiders mainly feed on benthic molluscs and thus depend on areas where bivalves are abundant and accessible to them. Many important habitats of common eiders have already been affected by activities that lead to a **reduction of food supply**, e.g. sand and gravel extraction or sediment dredging. In the Wadden Sea, overexploitations by commercial **mussel fisheries** has caused food shortages for common eiders (e.g. Scheiffarth & Frank 2005), which can cause mass starvation under unfavourable weather conditions or lead to poor body condition. In Denmark, the amount of body reserves acquired at the wintering quarters was found to be a significant predictor of female condition when ducklings hatch (Lehikoinen et al. 2008a). Thus, winter feeding condition is an important aspect to be considered in the interpretation of the underlying causes of reduced breeding success. Besides, increasing water temperatures during winter due to climate change effects and changes in phytoplankton communities due to decreasing nutrient levels can lead to a lower quality of mussels in spring and might thus reduce the possibilities of common eiders to increase their body reserves before migration and breeding. In the Baltic Sea, water temperatures have increased over the last two decades while nutrient levels have dropped at least in some areas (Bellebaum et al. 2012). In the Netherlands, high fishing pressure on the

major prey species, combined with a series of mild winters leading to low spatfall and reduced quality of mussels and cockles, and followed by a near-complete elimination of a secondary food source for eiders due to overfishing, presumably resulted in the mass mortality event of Common of 25 000 eiders in the winter of 1999/2000 (Camphuysen et al. 2002). Common eiders have a large flight distance with regard to vessels and usually take flight when a ship is approaching. Thus they are very sensitive to **disturbance by ship traffic**, but may show habituation effects in areas with regular and predicted ship movements (Schwemmer et al. 2011). Studies in the Wadden Sea revealed that common eiders are seriously disturbed by recreational boat traffic, causing birds to abandon suitable feeding sites and shift to other, undisturbed areas (Ketzenberg 1993). Particularly during the energy-consuming phase of moult, common eiders are highly vulnerable to disturbance caused by ship traffic or tourism and are dependent on undisturbed sea areas with sufficient food resources (Nehls 1991). Common eiders migrate in low flight altitudes and also during night and have only moderate flight manoeuvrability. Furthermore, they have restricted habitat use flexibility and are easily disturbed by ship and helicopter traffic. Hence, the species is particularly at risk of colliding with **offshore wind turbines and other obstacles** and has a high score in the wind farm sensitivity index (Garthe & Hüppop 2006). Barrier effects and habitat loss for common eiders have been documented at wind farms in the North and Baltic Sea. Moreover, mortality losses due to collisions were recorded from certain wind farms (compiled in Dierschke & Garthe 2006).

Assessment justification

Breeding

The Baltic eider population has been declining since the 1990s. In the most important breeding areas, the declines have been estimated at 25% in 20 years in Sweden, and 39% in 15 years in Finland, respectively. The overall decline within three generations (21 years) is assumed to exceed 30%. The reasons for the decline have not ceased. Hence, the species is classified as *Vulnerable* (VU) according to criterion A2abe.

Wintering

The species has a very large range and a large population size and hence it does not approach the thresholds for a Red List Category under criteria B, C and D. However, the two comprehensive Baltic Sea surveys indicated that the winter population of common eider has undergone a dramatic decline from c. 1 048 000 birds in 1988–1993 to 515 000 birds in 2007–2009, equivalent to 61% over three generations (1993–2014; 21 years, according to the HELCOM Red List of Breeding Birds, HELCOM 2012). Hence, the species qualifies for *Endangered* (EN) according to criterion A2, as the causes of the reduction are not yet understood and the reduction may not have ceased. Currently, Ekroos et al. (2012) published a new assessment of the development of the Baltic/Wadden Sea population of common eider. According to this study, the winter numbers declined between 1991 and 2000. Afterwards, numbers increased in the Baltic Sea during 2000–2009, but decreased in the Wadden Sea. However, the authors could not exclude the possibility that this increase in the Baltic was due to improvements in survey methods, i.e. more accurate census methods in Denmark and better coverage in the German Baltic Sea between 2000 and 2009. If so, the recent apparent increase in midwinter numbers reported may not reflect a real change in abundance (Ekroos et al. 2012). Hence, the assessment was based on the figures presented by Skov et al. (2011) and the species is classified as Endangered according to criterion A2b. As the population size is large and the species has a large wintering range in the Baltic Sea, criteria B, C and D do not apply.

Recommendations for actions to conserve the species

Management options to be implemented on the breeding grounds to increase adult survival and/or breeding success are hindered by the fact that breeding success is affected by many factors which may vary locally in relative importance (Ekroos et al. 2012). Conservation actions in the wintering areas seem more straightforward, but as probably only the cumulative effects of the various threat factors

eventually drive the dramatic decline, various management measures need to be considered. As chick production is dependent on body condition of female eiders, the conservation of the most important feeding areas is of considerable importance for the entire population. As the ratio of adult females in the population continues to fall, hunting during winter should mainly target male eiders (Ekroos et al. 2012). As a first step, this requires hunting studies on factors determining the current harvest rate. In Denmark, a reduction of the open season for female eiders probably resulted in a shifting sex ratio in the bag, with the harvest of females being considerably reduced (Bregnballe et al. 2006). Besides, a reduction of bycatch in fishing gear and the prevention of accidental and chronic oil pollution are necessary options to decrease additional mortality and to support the recovery of this species. As Schwemmer et al. (2011) assumed that common eiders may show habituation effects in areas with regular and predicted ship traffic, they recommended that spatial planning in marine areas should aim to channel ship traffic wherever possible to allow for habituation effects and to avoid further habitat fragmentation and loss of feeding and resting sites. Eventually, better coverage and better coordination of counts in winter and summer are also needed to get reliable monitoring data and models for forecasting the population development.

Common names

Denmark: edderfugl, Estonia: hahk, Finland: haahka, Germany: Eiderente, Latvia: parastā pūkpīle, Lithuania: gaga, paprastoji gaga, Poland: edredon, Russia: Обыкновенная гага, Sweden: ejder

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SPECIES INFORMATION SHEET *Xenus cinereus*

English name: **Terek sandpiper**	Scientific name: ***Xenus cinereus***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Güldenstädt, 1775	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Alien species (I01), Competition and predation (I02), Random threat factors (–), possibly Extra-regional threats (XE)	Future threats (Habitats Directive article 17 codes): Alien species (I01), Competition and predation (I02), Random threat factors (–), possibly Extra-regional threats (XE)	
IUCN Criteria: **D1**	**HELCOM Red List Category:**	**EN Endangered**
Global / European IUCN Red List Category (BirdLife International 2004) LC / LC	Annex I EU Birds Directive yes Annex II EU Birds Directive no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: –, Estonia: NA, Finland: CR, Germany: –, Latvia: –, Lithuania: –, Poland –/–, Russia: –, Sweden: –		

Range description and general trends:

The Terek sandpiper mainly breeds in central and northern Russia; however, its range stretches also patchily into Belorussia, the Ukraine, Finland and Latvia. The European breeding population is estimated at 15 000–81 000 bp, representing about a quarter of the global population.

Xenus cinereus. Photo by Christoph Moning.

Distribution and status in the Baltic Sea region

In the Baltic Sea area, there are only few breeding places with a low number of breeding pairs in Finland, St Petersburg Region of Russia and Latvia.

In **Finland**, the Terek sandpiper has been breeding since the 19th century, but has always been scarce despite temporal fluctuations on its resorts on the islets of the Bothnian Bay. Finnish numbers peaked at *c.* 30 bp in the 1980s. Currently, there are 5–10 bp.

In the **St Petersburg** region of **Russia**, the general trend seems to be increasing, despite considerable fluctuations. The total number of breeding pairs is estimated at 20–60.

In **Latvia**, the Terek sandpiper is a very rare bird. Nesting was first confirmed in 1980; the only nesting place is Nagli fishponds (eastern part of Latvia, now part of NATURA 2000 site Lubaans). Outside this place there have been not more than 10 observations during last 30 years. The breeding population is 1–2, maximum 5 pairs.

Table1: Population number of the Terek sandpiper in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Finland	5–10	2009	0	-
Latvia	1–2	2009	0	0
Russia, PET	20–60	2010	+	+
Baltic Sea	**30–70**			

SPECIES INFORMATION SHEET *Xenus cinereus*

Distribution map

SPECIES INFORMATION SHEET *Xenus cinereus*

Habitat and ecology

The Finnish breeding sites are mainly anthropogenic habitats around industrial resorts and harbours. Most territories have been found on landfills and pulp sinks of wood processing plants with ample bark and wood-residue bottom layer and muddy shores (Ojanen & Rauhala 1997). Older locations are often sparsely vegetated, vaguely reminiscent of the species original habitats on Siberian marshy riverbanks. Even sites of more natural state in the Bothnian Bay tend to have plenty of driftwood and debris on the shore.

The known breeding sites in St Petersburg Region at the first glance look quite different, but it is always a combination of several components: shallow waters with somewhat fluctuating water levels, sandy or gravely shores or river banks, and meadows with low vegetation.

Description of major threats

Unlike most other threatened waders in the Baltic region, the Terek sandpiper it is not predominantly a pasture-dweller. Although there are no habitat losses, the species has not markedly increased in Finland. The breeding success is not well known, but there are indications of increased nest predation due to the overall increase of common gulls, crows and mammalian predators. Unpredictable changes in the availability of anthropogenic habitats in the wood processing industry can create stochasticity that can drive small range populations to extinction within a short period of time. There are also former indications of illegal egg collection at the breeding sites. According to ring recoveries, the Finnish birds take a south-western migration route via southern France (Camargue; Glutz v. Blotzheim *et al.* 1977, Martin 1983), possibly overwintering in western Africa (Lake Tchad, coasts of Nigeria, Gaboon, northern Angola). These are areas of unstable environments, desertification and land degradation. However, the exact wintering areas of the Baltic Terek sandpipers are not yet known.

Assessment justification

The Baltic breeding population is estimated to only 30–70 pairs. The species is categorized as *Endangered* (EN) due to its small population size (criterion D1). However, the Baltic breeding sites are representing the outermost margins of the range of the species. In its total range the species is evaluated as “secure” (BirdLife International 2004).

Recommendations for actions to conserve the species

Ringing programmes and population studies should be started in order to reveal the wintering sites, migration routes and basic population parameters of the Baltic breeding birds. More efforts are also needed to locate all breeding sites in the Bothnian Bay. At anthropogenic breeding sites, authorities should be aware of the presence of the species and its legal status.

Common names

Denmark: Terekklire, Estonia: Hallkibu, hallkibu (kibutilder), Hallkibu e. kibutilder, Finland: rantakurvi, Germany: Terekwasserläufer, Latvia: Mazā puskuitala, Pelēkā terekija, Pelēkā tilbīte, Terekija, Lithuania: Terekija, Poland: terekia, Russia: Мородунка, Sweden: Tereksnäppa

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SPECIES INFORMATION SHEET *Arenaria interpres*

English name: **Ruddy turnstone**	Scientific name: ***Arenaria interpres***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03, K02), Alien species (I01), Competition and predation (I02), potentially Extra-regional threats (XE)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03, K02), Alien species (I01), Competition and predation (I02), potentially Extra-regional threats (XE)	
IUCN Criteria: **A2abce + 3ce + 4abce**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category (BirdLife International 2004) LC / LC	EU Birds Directive-no	
Red List status in HELCOM countries: Denmark: EN, Estonia: VU, Finland: VU, Germany: 2 (Endangered), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: VU		

Range description and general trends

The ruddy turnstone breeds in coastal areas of northern Europe. The European population is estimated at 34 000–81 000 bp, of which the Baltic Sea area hosts only a small proportion of 4 450–5 200 bp. The highest numbers of breeding pairs in the Baltic are found in Sweden and Finland.

Arenaria interpres. Photo by Lutz Ritzel.

Distribution and status in the Baltic Sea region

In **Sweden**, the ruddy turnstone has disappeared from the west coast in 1995. Currently it breeds on the east coast between Blekinge and Norrbotten, but also at lake Vänern, although the lake-dwelling population has always been small (0–12 pairs during the last 20 years). The overall population trend is strongly negative, although the main strongholds in the Västerbotten county slightly increased during

the past 20 years, harboring now 600 pairs. There are still 150–250 pairs on Gotland. A remarkable decline took place in the Stockholm–Uppsala archipelago, from 1 600 bp in mid-1970s to less than 500 currently. The total Swedish population numbers 1 500–2 200 bp, which is only 50% of amount from 20 years ago.

In **Finland**, the ruddy turnstone breeds along the entire coast. Since the 1980s, a decline of 47% has been observed, and in the last 15 years the decline has been estimated at 30%. The current population size is assessed at 2 800 bp (Hario & Rintala 2011).

In the **Russian** Baltic Sea area the species only breeds in St. Petersburg region with few (5–10) pairs. The short-term trend seems to be negative, the long-term trend is unknown.

The **Estonian** population amounted 100–150 bp during the period 2003–2008. It has suffered a strong decrease (>50%) during the period 1971–1990 and a moderate decline (10–50%) in 1991–2008 (Elts *et al.* 2009).

At the **German** Baltic coast, the ruddy turnstone disappeared as a breeding bird from Schleswig-Holstein already before 1900 (Berndt *et al.* 2002). In Mecklenburg-Western Pomerania, it was a breeding bird during the 19th century and at the beginning of the 20th century in small numbers in the Wismar Bight and on the islands west of Rügen (Hiddensee, Heuwiese). The last breeding record dates from 1918 from the southern parts of Hiddensee (Schulz 1947).

In **Denmark**, the main breeding site is the island Læsø in the northern Kattegat. However, occasionally the ruddy turnstone may also breed on other locations, as for instance on Saltholm in 2009. Until the mid-1990s, turnstones also bred regularly on small islands around Fyn (Møller 1975, Sørensen 1995, Rasmussen 2010). The Danish breeding pair numbers were 38–39 in 1974, 40 in 1990, 36 in 1996, 37–41 in 2000, 51 in 2006, 48–49 in 2007, and 36–38 in 2009 (Grell 2001; Nyegaard & Grell 2007, 2008; Nyegaard & Willemoes 2010).

Table 1: Population numbers of the ruddy turnstone in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	1 500–2 200	2010	-	-
Finland	2 800	2010	-	+
Russia - PET	5–10	2009	-	?
Estonia	100–150	2003–2008	-	-
Germany - SH	0	extinct		
Germany - MV	0	extinct		
Denmark	36–38	2009	0	0
Baltic Sea	**4 450–5 200**			

SPECIES INFORMATION SHEET *Arenaria interpres*

Distribution Map

SPECIES INFORMATION SHEET *Arenaria interpres*

Habitat and Ecology

The turnstone used to be the most numerous wader species in the northern Baltic archipelagos, but has recently lost this position to the oystercatcher in many places. With an arctic overall distribution, the turnstone inhabits the barren, treeless parts of the outer archipelago and is completely lacking at the mainland shores. It associates with terns and smaller gulls at the breeding sites, reaching highest densities in their colonies, at best 10–20 pairs on small islets of less than 5 hectares (Vuolanto 1968). The species breeds also solitarily.

Description of major threats

The decline of the turnstone in the Baltic Sea area is most obvious in the southern part of its breeding range and in the inner zones of the archipelagos. These are areas of the highest rate of overgrowth and also of the highest rate of mammalian predation. Also land uplift is lowest in the south, giving less compensation for the overgrowth of breeding sites and creating less new breeding habitats. Possibly also the predation by crows (including the Raven) is heavier in the south. These can be factors that have produced the pronounced dichotomy according to zonation in its current distribution. The turnstone is a cosmopolitan migrant in tropical and subtropical coasts where it spends 3–6 years before becoming sexually mature (Vuolanto 1968). Yet, nothing is known about subadult and adult mortality and overwintering success.

Assessment justification

The species is classified, according to the observed decline during the last 3 generations and the expected continuation of this trend, as Vulnerable (VU) according to the criteria A2abce + 3ce + 4abce.

Recommendations for actions to conserve the species

Control of predatory mammals in the breeding areas of turnstones should be done in order to enhance the reproduction rate. Also, cutting perching trees of skulking Crows and Ravens is beneficial. Clearing juniper cover can restore old breeding sites, although preference for rocky habitats instead of sandy ones makes the species less vulnerable to the effects of overgrowth. Providing semi-artificial sheltered nest sites under flat stones and in debris/ driftwood reduces egg losses. A pan-Baltic ring recovery analysis should be done in order to reveal the main migration and wintering areas.

Common names

Denmark: Stenvender, Estonia: Kivirullija, Finland: Karikukko, Germany: Steinwälzer, Latvia: Akmenstārtiņš, Akmeņtārtiņš, Lithuania: Akmene, Akmenė, Poland: Kamusznik, Russia: Камнешарка, Sweden: Roskarl

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SPECIES INFORMATION SHEET *Aythya marila*

English name: **Greater Scaup**	Scientific name: ***Aythya marila***	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1761	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Bycatch (F03.02.05), Alien species (I01), Competition and predation (I02), Oil spills (H03.01), Extra-regional threats (XO), Hunting (F03.01)	Future threats (Habitats Directive article 17 codes): Bycatch (F03.02.05), Alien species (I01), Competition and predation (I02), Oil spills (H03.01), Extra-regional threats (XO), Hunting (F03.01)	
IUCN Criteria: **A2bcd**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category (BirdLife International 2004) LC / EN (A2b)	Annex I EU Birds Directive: no Annex II EU Birds Directive: II B (BE, DK, DE, EL, FR, IE, LV, NL, RO, UK)	
Red List status in HELCOM countries: Denmark: NA, Estonia: CR, Finland: EN, Germany: R (Extremely rare), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: VU		

Range description and general trends

The greater scaup breeds at high latitudes across northern Eurasia and North America. The nominate subspecies occurs in western Eurasia where it breeds in Iceland, Scandinavia and northern Russia east to the Lena River, and along the Baltic coasts in Sweden, Finland, and Estonia. This European breeding population constitutes 25–49% of the global population.

The EU breeding population counts 1 400–2 400 pairs and is small compared to the European population (180 000–190 000 pairs). The European winter population amounts >120 000.

The breeding population in Europe and the EU underwent a large decline during 1970–2000. Between 1990 and 2000, the key winter populations in Europe underwent a very large decline (>50%), and the scaup is now evaluated as “endangered” (European Commission 2009).

Aythya marila. Photo by Christopher Plummer.

SPECIES INFORMATION SHEET *Aythya marila*

Distribution and status in the Baltic Sea region

The Swedish and Finnish breeding populations count about 1 400–2 400 bp, of which 650–700 are breeding in Baltic coastal areas and the remainder in mountain areas of north-western Sweden and in Finnish Lapland. The population has been declining since at least 1970.

Sweden hosts a population of 900–1 900 bp. The birds are mainly found in the north-west on mountain lakes surrounded by birch forest. About 200 pairs (Ottosson *et al.* 2012) breed along the coast of the Baltic Sea from Gotland northwards with a concentration at the Quark (county of Västerbotten; Haldin 1997, Tjernberg & Svensson 2007). The Swedish population has been declining strongly over the last 100 years, particularly in the southern part of its range (SOF 1990). In the Stockholm archipelago, a 50% reduction in breeding numbers was observed between 1937–38 and 1974–76. In 1974–76, the population counted still 100 bp, but now it is completely extinct (Eklund 2009). Tjernberg & Svensson (2007) estimate the recent decline of the Swedish population to at least 10% during the last 20 years.

In **Finland**, the greater scaup breeds mainly along the Baltic coast; the northernmost Lapland holds only about 50 pairs. The bulk of the population nests in a relatively small area immediately south of the Quark, Bothnian Bay, one of the few regions with densities comparable to the main breeding areas in the Russian tundra (Haldin 1997). The Finnish breeding population was still 900–1 100 bp during 1995–98, but was estimated at only 500 bp in 2009. The smaller local populations in the southern Bay of Bothnia have undergone large declines during the last ten years, and several were extinct by 2006 (Hario & Rintala 2007). Also the population in the Quark declined by 40% from the 1950s to the 1980s (Hildén *et al.* 1995), but during the 1990s it kept relatively constant. An up-to-date inventory in the Quark is urgently needed. In all, the recent decline of the Finnish population has been estimated at 47% in 10 years.

The **St. Petersburg Region of Russia** hosts a small population of 1–5 bp, whereas in the Kaliningrad region the greater scaup is not a breeding bird. The greater scaup has been a regular breeder since the 1950s in **Estonia** with a small population of some 50 pairs in the 1990s (Haldin 1997, Snow & Perrins 1998, BirdLife International 2006). This population declined strongly during the periods 1971–1991 and 1991–2008 (decline >50% in each period) to only 1–10 bp in 2003–2008 (Elts *et al.* 2009).

In **Poland**, the greater scaup is only an exceptional breeder (Tomiałojć & Stawarczyk 2003).

A small population has recently established in **Germany / Schleswig-Holstein**. The first breeding record dates to 1981 from the Hauke-Haien-Koog/North Sea. The first breeding at the Baltic Sea was recorded in 1990 (Oehe-Schleimünde). During the 1990s, the breeding pair number was about 5, of which the majority bred at the North Sea (Berndt *et al.* 2002). In more recent times, single pairs have been observed occasionally (Knief *et al.* 2010). In 2011, a female with pulli has been seen in the Plön lake area.

From **Denmark**, single broods have been reported starting from 1988 (Grell 1998).

Table 1: Population numbers of the greater scaup in the Baltic Sea area. For population trends 0=stable, -=decreasing, --=strongly decreasing.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	year		
Sweden	900–1900	2010	-	-
Finland	500	2009	--	--
Russia, PET	1–5	2009	0	0
Estonia	1–10	2003–2008	--	--
Poland	Sporadic, single pairs	End of the 1990s		
Germany, SH	Sporadic, single pairs	Since 1981		
Denmark	Sporadic, single pairs	Since 1988		
Baltic Sea	**1 400–2 400**			

SPECIES INFORMATION SHEET *Aythya marila*

Distribution Map

SPECIES INFORMATION SHEET *Aythya marila*

Habitat and Ecology

In Fennoscandia, greater scaups breed in two rather different habitats: on mountain lakes in the upland birch region (Haapanen & Nilsson 1979), and on small islands and skerries in the outer archipelago of the Baltic Sea. In Finland it almost exclusively breeds on small islands along the Baltic coast. The greater scaup is not colonial, but in dense breeding areas nests are sometimes within distances of c. 1 m (Snow & Perrins 1998).

Description of major threats

The reasons for the decline are not well known, but several possible factors have been identified. Drowning in fishing nets is a problem both in breeding and wintering areas. In the wintering areas, degradation of feeding opportunities through intensive shell fisheries, offshore sand and gravel extraction, and contamination in connection with oil pollution are believed to be important. The hunting take-off within the EU constitutes only 2% of the European wintering population (European Commission 2009). However, according to ring recoveries, hunting affects the tiny Baltic breeding population. A further cut of unknown magnitude may be the share of scaups bagged as Tufted Ducks in countries with no open season for the species. Fledgling production is currently low, leading to insufficient recruitment rates. In Finland, especially the predation on ducklings by large gulls has been identified as a major problem.

Assessment justification

Since the data for the population development in Sweden are of rather low quality, the Red List assessment of the greater scaup in the Baltic Sea area includes a certain level of uncertainty. However, it is likely that the population size reduction exceeds 30% over the last 15 years. The factors responsible for the negative trend have not ceased. It is expected that the number of reproductive individuals remains low and the greater scaup is assessed as Vulnerable (VU) according to criterion A2bcd.

If only the breeding population of the Baltic coastal areas is considered, the species fulfils the criteria for Endangered (EN) according to criteria A2bcd; C1.

Recommendations for actions to conserve the species

Studies of the Baltic Sea breeding grounds should be intensified in order to reveal the current per capita fledging rate. Control programmes on predatory mammals are needed to secure breeding success. Hunting is likely to affect the population. Hence, the species should be deleted from annex II of the Bird's Directive. It also should be banned in Russia. By-catches in gillnet fisheries are high in both wintering and staging areas along the migration routes. Beside other mitigation measures, a seasonal ban of gillnet fisheries in the most important staging and wintering areas should be taken into consideration. The conservation strategies should also focus on actions to minimise the effects of oil and gas exploration and extraction of sand and gravel and to reduce the shellfish fisheries in the Wadden Sea.

Common names

Denmark: Taffeland, Estonia: Merivart, Finland: lapasotka, Germany: Bergente, Latvia: Ķerra, Lithuania: Baltakaktė antis, Žiloji antis, Poland: Ogorzałka, Russia: Морская чернеть, Sweden: Bergand

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SPECIES INFORMATION SHEET *Cepphus grylle*

English name: **Black guillemot**	Scientific name: ***Cepphus grylle***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Alcidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: *Cepphus grylle grylle* (inner Baltic population) *Cepphus grylle arcticus* (Kattegat population)	Generation length: 9 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Alien species (I02), Native species (I01), Hunting (F03.01, F03.02.02), Contaminant pollution (H03.02) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Alien species (I02), Native species (I01), Hunting (F03.01), Contaminant pollution (H03.02) Wintering: Oil spills (H03.01), Bycatch (F03.02.05), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria breeding: *Cepphus grylle grylle*: **A2ab** *Cepphus grylle arcticus*: **–**	**HELCOM Red List Category breeding:**	
	Cepphus grylle grylle	**NT Near Threatened**
	Cepphus grylle arcticus	**LC Least Concern**
IUCN Criteria wintering: *Cepphus grylle grylle*: **A2ab** *Cepphus grylle arcticus*: **D2**	**HELCOM Red List Category wintering:**	
	Cepphus grylle grylle	**NT Near Threatened**
	Cepphus grylle arcticus	**VU Vulnerable**
Global / European IUCN Red List Category LC / LC	Habitats Directive: no	
Red List status in HELCOM countries: Denmark: LC, Estonia: VU, Finland: LC, Germany: “particularly protected” under the Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT (breeding)		

Range description and general trends

The black guillemot breeds circumpolar in Arctic waters and also occurs in boreal and sub-Arctic areas in the Atlantic region, with the breeding range stretching along the coastlines of the North Pacific, Arctic North America, Greenland, the Eurasian Arctic archipelagos and Northwest Europe (Bauer et al. 2005, Gaston & Jones 1998). The species is a widespread breeder of coastal areas of northern Europe, which constitutes >50% of its global breeding range. The European breeding population consists of >130 000 breeding pairs (bp). The species underwent a moderate decline between 1970 and 1990, but increased, fluctuated or was stable across most of its European range (BirdLife International 2004). There are 5 subspecies recognized, two of them (C. grylle grylle and C. grylle arcticus) breeding in the Baltic Sea area. The Baltic population counts about 19 000–22 500 bp. Black guillemots winter mostly in the vicinity of their breeding grounds. Occasionally wintering birds can be found up to the Atlantic coast of France (Bauer et al. 2005).

SPECIES INFORMATION SHEET *Cepphus grylle*

Distribution and status in the Baltic Sea region

In the Baltic Sea area, black guillemots occur with two distinct populations, which are assumed to belong to two different subspecies. The Baltic population *Cepphus grylle grylle* breeds at the Swedish east coast, in Finland, St Petersburg region of Russia, and Estonia. This breeding population covers an extensive range, and the species is very dispersed during the breeding season. The birds are very sedentary and often overwinter in the vicinity of their breeding grounds. This at least applies to adult birds, whereas immatures frequently migrate and winter further offshore. In hard winters, all guillemots are forced to move into offshore areas in the southern Baltic Sea when the waters in the northern parts freeze up.

In the west, the Atlantic population *Cepphus grylle arcticus* stretches into the Baltic Sea area, breeding in the Danish Kattegat and on the Swedish west coast. These birds mainly winter in the north-western Kattegat. Only immatures make short movements (Durinck et al. 1994).

Breeding

The **Swedish** breeding population consists of about 7 500–10 000 bp; about 6 300–8 800 belong to the subspecies *C. grylle grylle*, which breeds in the inner Baltic. About 1 250 bp belong to the subspecies *C. grylle arcticus*, which breeds along the Swedish west coast. However, of the Swedish west coast population, about 600 bp are breeding in the Skagerrak outside the Helsinki Convention area, and 650 bp within the Helsinki Convention area in the Kattegat (M. Tjernberg, pers. comm.). The species is missing in Skåne, Blekinge, soutern part of Småland, and on Öland; it is rare in Östergötland (10 pairs). The trend has been declining with 15–30% from 1980–2010; it is categorized as NT in the Swedish Red List (Ottvall et al. 2009, ArtDatabanken 2011, Ottosson et al. 2012).

Finland hosts currently about 11 000 bp. The species has declined markedly during the last decade. It was still estimated at 17 000–20 000 bp in the 1990s (Hario & Rintala 2011, Väisänen et al. 2011).

The **St Petersburg region of Russia** and **Estonia** host only a small proportion of the Baltic population, both regions together < 150 bp (Elts et al. 2009).

In **Denmark**, the black guillemot is breeding in the Kattegat. The numbers have increased from 950–1 150 bp in 2000/2001 (BirdLife International 2004) to at least 2 050 in 2010 (Bregnballe & Asbirk 2011). The majority is breeding at Hirsholmene (ca. 1300 bp) and Deget (ca. 200 bp), i.e. off the coast of Frederikshavn in NW Kattegat.

Table 1: Population numbers of the nominate subspecies *Cepphus grylle grylle* in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, ?=unknown.

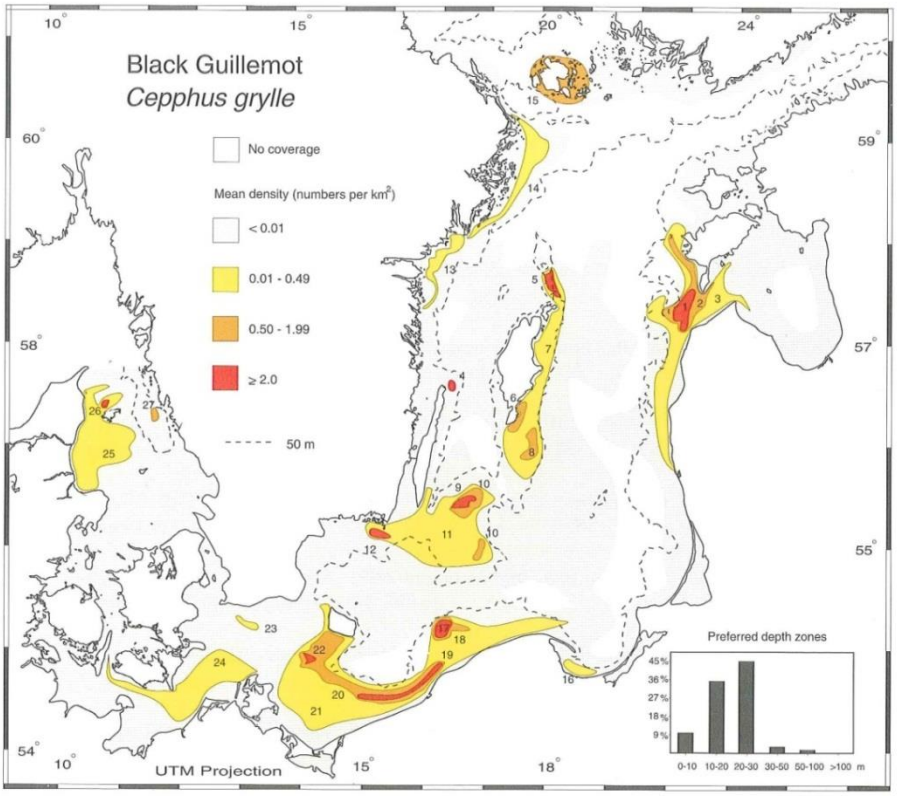
Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	6 300 – 8 800	2012	-	-
Finland	11 000	2001–2011	-	+
Estonia	20–40	2003–2008	0	0
Russia PET	50–100	2009	-	?
Baltic Sea	**17 400 – 19 900**			

Table 1: Population numbers of the Kattegat population of *Cepphus grylle arcticus*. For population trends +=increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	650	2012	?	?
Denmark	2 050	2010	+	+
Baltic Sea	**2 700**			

Wintering

Comprehensive information on the winter distribution of black guillemots exists only from the early 1990s. According to Durinck et al. (1994), the most important wintering area stretches from the Rønne Bank southward to the Pomeranian Bay and eastward along the Polish coast to the Slupsk Bank. Other important areas are the Irbe Strait, the Midsjö Banks area and the sea off the east coast of Gotland (Map 1). The small Kattegat population mainly winters in the northern Kattegat. However, birds in the western part of the Baltic Sea can belong to both subspecies.



Map 1. Distribution and density of wintering black guillemots (*Cepphus grylle*) in the Baltic Sea, 1988–1993. The histogram shows the proportion of birds recorded in different depth zones during the surveys. From Durinck et al. (1994).

SPECIES INFORMATION SHEET *Cepphus grylle*

Distribution map

Map 2: Breeding distribution of black guillemots in the Baltic Sea area.

SPECIES INFORMATION SHEET *Cepphus grylle*

Habitat and ecology

The breeding habitat of the black guillemot is the archipelago areas in Sweden, Finland, St. Petersburg region of Russia, and Estonia where they breed on rocky, gravelly or sandy islets and on low cliffs. Breeding colonies often comprise only a few pairs, but some may contain several hundred pairs (Grell 1998). In the Kattegat, the species breeds along the Swedish west coast and on Danish islands, especially at Hirsholmene.

In winter, black guillemots are distributed closer inshore or in shallower water than other auk species but may be forced further offshore by ice coverage. In the Baltic Sea, the main habitats during winter are offshore banks and shallow sublittoral areas with gravely sediments holding a water depth of less than 25 m (Durinck et al. 1994). Black guillemots mainly feed on small benthic or benthopelagic fish and invertebrates, especially crustaceans (Durinck et al. 1994, Mendel et al al. 2008).

Description of major threats

During the breeding season, mortality from native and non-native mammalian **predators** is the main threat to black guillemots, in Sweden above all by mink *Mustela vision*. Besides, the **availability of food and nesting habitats** also limit the size of breeding populations. Such factors may explain the relatively small colony sizes observed throughout much of the black guillemots' range. Furthermore, black guillemots are at greater risk than other alcids from the biological magnification of **pollutants** in the food chain, as a consequence of their inshore and bottom-feeding habits (http://birds.audubon.org/species/blagui1). In the past, **direct persecution** and the **collection of eggs** led to a severe population decline, e.g. in Denmark (Grell 1998). At present, **hunting** continues to be a significant factor in Scandinavia (Mendel et al. 2008).

In the wintering areas, various pressures were identified that have possibly caused or at least contributed to the observed declines:

In the Baltic wintering areas, intense **gillnet fisheries** impose a high risk of entanglement and drowning for diving bird species. Gillnet fisheries are mainly operated in shallow coastal areas and on offshore grounds and may thus overlap with the resting and feeding areas of black guillemots. According to Žydelis et al. (2009), hundreds of black guillemots are caught annually in gill nets in the Baltic Sea, predominately in Estonian, Lithuanian, Polish and Swedish waters. Black guillemots spend large proportions of time swimming on the water and the winter distribution in the Baltic Sea is concentrated to a few main areas. The species is thus highly vulnerable to **oil pollution** in these areas. The decimating effects of crude-oil spills on black guillemot colonies, including those at Denmark's Kattegat, have been clearly demonstrated. In 1991 an oil spill near the Shetland Islands killed about 1,700 guillemots, equivalent to 14% of Shetland's population. Although the disturbance distance of black guillemots with regard to vessels is only moderate, the birds usually take flight when a ship is approaching (FTZ Büsum unpubl. data). This pronounced sensitivity to **ship traffic** may cause the birds to avoid busy shipping lanes and thus influence the distribution of black guillemots. Even in less frequently sailed areas, ship traffic may cause fragmentation and loss of suitable feeding and resting habitats. Due to the pronounced sensitivity of black guillemots with regard to ship traffic, **offshore wind farms** and associated ship movements are likely to scare birds and thus may entail fragmentation and loss of habitats. In their wintering areas at sea, black guillemots mostly move by swimming, but are assumed to fly between different resting sites. Their manoeuvrability in flight is only moderate. Hence, the species is at risk of colliding with offshore wind turbines and other obstacles, especially in unfavourable conditions with poor visibility (Mendel et al. 2008). Information on the diet of black guillemots in the Baltic Sea is scarce, but they are likely to feed on benthopelagic prey like small fish species and crustaceans (FTZ Büsum unpubl. data; see also Madsen 1957). Thus, the **reduction or destruction of bottom habitats** of their favorite prey species e.g. by sand and gravel extraction or by dredging activities for shipping channels and coastal development may decrease the food availability for the species.

SPECIES INFORMATION SHEET *Cepphus grylle*

Assessment justification

Breeding

The nominate subspecies *Cepphus grylle grylle* has been declining in its main breeding areas, i.e. Sweden and Finland. The decline in Sweden during 3 generations (27 years) is more than 15, but less than 30%. The most recent figures for Finland even indicate a decline of more than 30%. However, for the total population the decline is most likely less than 30%; the species is classified as NT according to the criterion A2ab.

The population of *Cepphus grylle arcticus* in the Danish Kattegat and at the Swedish west coast has been increasing. Different to the classification of the wintering population the breeding sites are more scattered and numerous, the criterion D2 is not met; the subspecies hence is classified as LC.

Wintering

Information on the population size of birds wintering in the Baltic Sea is scarce. However, black guillemots usually winter near their breeding grounds and thus the winter population can be assessed according to the development of the breeding population. Also the **Baltic population** of black guillemots *Cepphus grylle grylle* is assumed to winter in the Baltic Sea only, and thus the development of winter population comes along with the development of the breeding population, which was assessed *Near Threatened* (see above). Accordingly, the winter population of *Cepphus grylle grylle* is also classified NT.

The **Atlantic population** *Cepphus grylle arcticus* mainly winters in the northern Kattegat area in the vicinity of the breeding areas in the Danish Kattegat and on the Swedish west coast. In accordance with the increasing breeding population in Denmark, where highest breeding numbers in the Kattegat area are found, the winter population is supposed to be increasing, too, and hence the species does not approach the threshold for NT under criteria A and C. As the winter distribution is restricted to the northern Kattegat area, the species meets the threshold for *Vulnerable* under the range size criterion (extent of occurrence <20 000 km²), combined with a low number of locations. However, none of the other conditions (declining or fluctuating range size, habitat extent/quality, or population size) is fulfilled, hence the species does not classify for a Red List category under criterion B. The area of occupancy exceeds 4 000 km² (see Durinck et al. 1994) and thus does not approach the threshold for a Red List category, either. However, due to the low number of wintering locations (probably < 6, see Durinck et al. 1994), there is an imaginable threat that can make the species capable of becoming CR or RE within a very short time, e.g. an oil spill in the northern Kattegat area. Accordingly, the species is classified as *Vulnerable* under criterion D2.

Recommendations for actions to conserve the species

Restoration of local breeding populations can be encouraged by controlling predators, and by providing artificial nest sites, particularly where this is a limiting factor. The latter has been a successful measure e.g. in the breeding population on Cooper Island, Alaska (see http://birds.audubon.org/species/blagui1). In the wintering areas, measures to reduce by-catch (e.g. reduction or even ban of setnet fishery in the most important wintering areas), and measures to reduce oil pollution are the most important actions to conserve the species. Furthermore, important feeding habitats need to be protected, e.g. against substrate extractions or dredging activities.

Common names

Denmark: tejst, Estonia: krüüsel, Finland: riskilä, Germany: Gryllteiste, Latvia: melnais alks, Lithuania: taiste, Poland: nurnik, Russia: Обыкновенный чистик, Sweden: tobisgrissla

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SPECIES INFORMATION SHEET *Hydroprogne caspia*

English name: **Caspian tern**	Scientific name: ***Hydroprogne caspia***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Sternidae	Species authority: Pallas, 1770	
Subspecies, Variations, Synonyms: –	Generation length: 10 years	
Past and current threats (Habitats Directive article 17 codes): Extra-regional threats (e.g. hunting; XE), Alien species (I01), Competition and predation (I02)	Future threats (Habitats Directive article 17 codes): Extra-regional threats (e.g. hunting; XE), Alien species (I01), Competition and predation (I02), potentially Climage change (M)	
IUCN Criteria: **C1**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category (BirdLife International 2004) LC / LC	Annex I EU Birds Directive:yes Annex II EU Birds Directive:no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I) and in Russia (Red Data Book of the Russian Federation)* Denmark: RE, Estonia: VU, Finland: NT, Germany: 1 (Critically endangered), Latvia: –, Lithuania: –, Poland: –, Russia: 3 (Rare), Sweden: VU		

Range description and general trends

The Caspian tern breeds patchily along the Baltic, Black Sea and Caspian Sea coasts. The European population is small, with about 1 700 bp in the Baltic, 800 in the Black, and 2 000 in the Caspian Sea (Tjernberg & Svensson 2007). It was breeding also at the German North Sea coast, but this population got extinct during World War I (Schulz 1947). The European population underwent a large decline between 1970–1990, but increased during 1990–2000 (BirdLife International 2004).

Hydroprogne caspia. Photos by Jürgen Reich.

SPECIES INFORMATION SHEET *Hydroprogne caspia*

Distribution and status in the Baltic Sea region

The Baltic breeding population increased from 500 bp in the mid–1930s to 1 200 bp in 1953 and finally to 2,500 bp in 1971, an undisputed peak so far. Until 1984 the population declined to 1 900 bp (Hario *et al.* 1987), and further to 1 600–1 700 pairs currently.

The **Swedish** population has suffered a decline from 850–950 bp in 1971 (Väisänen 1973) to 532 bp in 2010 (Staav in Eskildsen & Vikstrøm 2011). However, the trend is characterised by certain fluctuations – there were 500 bp in 2000, but 660 in 2007. Most of the birds are breeding in colonies, but some (19% in 2010, 13% in the average) are also found as single breeding pairs from Scania to Norrbotten and inland at Lake Vänern (Tjernberg & Svensson 2007).

In **Finland**, the population peaked at 1,200 bp in 1971 (Hario *et al.* 1987). After a period of decline it has stabilized at around 800–900 bp in recent times. About 700 of them nest in colonies, the others as solitary pairs.

In the **Russian** part of the easternmost Gulf of Finland, 20–40 bp were encountered in the Bolshoi Fiskar archipelago during 1995–2006, but in 2010 none was discovered despite a complete survey and mapping of seabird colonies across the Gulf (A. Kondratiev, *pers. com*.). Another colony was found in 1992 on Moshny Island (Noskov *et al.* 1993). However, this colony has not been visited again. In 2007–2010 Caspian terns have been seen at different points of the Russian part of the Gulf of Finland; breeding on some of the islands is not unlikely. In Lake Ladoga there were *c.* 10 bp, but on the territory of Karelia.

After a long time of stability, the **Estonian** breeding population recently has suffered some decline. In 1971, 356 bp have been counted (Väisänen 1973). For 1998–2002, Elts *et al.* (2003) give a population number of 250–400 bp, but only 150–250 bp were estimated for the period 2003–2008 (Elts *et al.* 2009).

In **Latvia**, one single breeding has been recorded in 1976 (Vīksne *et al.* 1980). The same is true for **Poland**, where the Caspian tern has been found breeding in 1969 near Łeba (Tomiałojć & Stawarczyk 2003).

In the south-western Baltic, the species is rare and has not been a permanent breeder. It was obviously breeding at the end of the 18th century on the island Großer Stubber in the Greifswald Lagoon (**Germany, Western Pomerania**; Otto 1776), but then disappeared for about 150 years. It possibly bred around the island Hiddensee during the 1930s (Schulz 1947), but the first doubtless breeding record of recent times dates from 1956, when a clutch was found on the small bird island Heuwiese (Dost 1963). Since then, the species has bred regularly, though not in all years, with 1–3 bp on small islands around Rügen (mainly Heuwiese and Beuchel). There was no breeding record from 2005–2009, but in 2010 one pair bred successfully on the island Beuchel.

In **Denmark**, breeding of the Caspian tern is exceptional. There was one breeding record on Saltholm in 2009 – the first record after 1944 (Nyegaard & Willemoes 2010). In 2010, 2 breeding pairs have been recorded on Saltholm and Øksneholm in the Roskilde Fjord (Eskildsen & Vikstrøm 2011).

SPECIES INFORMATION SHEET *Hydroprogne caspia*

Table 1: Population numbers of the Caspian tern in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, f=fluctuating, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	year		
Sweden	532	2010	f	-
Finland	880	2010	0	+
Russia PET	0–20	2010	f	?
Estonia	150–250	2008	-	0
Latvia	Exceptional	1976		
Poland	Exceptional	1969		
Germany MV	1–3	Since 1956		
Denmark	Sporadic, 1–2	1944; 2009/10		
Baltic Sea	**1 600–1 700**			

SPECIES INFORMATION SHEET *Hydroprogne caspia*

Distribution Map

SPECIES INFORMATION SHEET *Hydroprogne caspia*

Habitat and ecology

The cosmopolitan Caspian tern inhabits a wide range of aquatic habitats. Within the Baltic range, it breeds in the outer archipelago and has recently colonized a few inland lakes in small numbers (Lake Ladoga in Russia, Vänern in Sweden12, Vanaja in Finland). Foraging flights venture inland up to 30–100 km distances from the coast (Soikkeli 1973). The Baltic population is a distinct unit, with no apparent interchange with its nearest neighbouring population in the Black Sea despite these two populations sharing the same wintering areas in the inundation zone of the river Niger in Mali (Staav 1979). Within the Baltic archipelago, it is highly maritime occurring colonially on exposed outer skerries or solitarily on small rocks, always together with other larids (Numers 1995).

About 90% of the population breeds in colonies (of up to 300 pairs), the remainders being solitary. Small groups of less than 10 pairs always result from splitting of larger colonies, and such groups seldom breed in two consecutive seasons before merging again (Bergman 1980).

Description of major threats

Predation on Caspian tern eggs and chicks by herring gulls and white-tailed eagles has recently devastated colonies in Sweden, and red Foxes have caused colony shifts in Estonia. Egg collection by local people still occurs in Estonia and Russia (BirdLife Finland 2007). Mortality of first-winter birds in the Sahel zone has increased during the post-1960s draught years, as revealed by Finnish ring recoveries (Hario et al. 1987, Zwarts et al. 2009). This is the most obvious single reason for the long-term decline of the Baltic population although there are also indications of elevated adult mortality in recent years. This, together with breeding failures due to predation, leads to a currently critical situation of the Caspian tern in the Baltic Sea area.

Assessment justification

The Baltic breeding population counted about 2 500 bp at the beginning of the 1970s, but declined to 1900 bp in 1984, and 1 600–1 700 currently. Considering the population size, the period of 3 generation lengths (i.e. 30 years) and the observed continued decline the species classifies as Vulnerable (VU) according to criterion C1.

Recommendations for actions to conserve the species

The main conservation measure is the control of predatory mammals on breeding islands of the Caspian tern.

Common names

Denmark: Rovterne, Estonia: Räusk, Finland: Räyskä, Germany: Raubseeschwalbe, Latvia: Lielais zīriņš, Lithuania: Plėėrioji žuvėdra, Plešrioji žuvedra, Plėšrioji žuvėdra, Poland: Rybitwa wielkodzioba, Russia: Черрава, Sweden: Skräntärna

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SPECIES INFORMATION SHEET

Larus fuscus fuscus

English name: **Lesser black-backed gull**	Scientific name: ***Larus fuscus fuscus***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 10 years	
Past and current threats (Habitats Directive article 17 codes): Epidemics/diseases (K?), Extra-regional threats (DDT, hunting; XE), Contaminant pollution (H03), Alien species (I01), Competition and predation (I02), Tourism (G01)	Future threats (Habitats Directive article 17 codes): Epidemics/diseases (K?), Extra-regional threats (DDT, hunting; XE), Contaminant pollution (H03), Alien species (I01), Competition and predation (I02), Tourism (G01)	
IUCN Criteria: **A2abce**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category (BirdLife International 2004) LC / LC Assessment on species level, not for the sub-species *L. f. fuscus*	Annex I EU Birds Directive: no	
	Annex II EU Birds Directive: II B (DK, DE)	
Red List status in HELCOM countries: Denmark: LC (species level), Estonia: EN (species level), Finland: VU (species level), Germany: * (Not threatened, species level), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT (species level)		

Range description and general trends

Larus fuscus fuscus. Photo by Andrei Frenkel.

The lesser black-backed gull is a widespread breeder in coastal areas of northern and western Europe. There are 3 subspecies recognized: The lesser black-backed gulls of the central and eastern Baltic Sea and eastern Scandinavia belong to the nominate sub-species *Larus fuscus fuscus*. A second sub-species, *L. fuscus intermedius,* breeds in the Netherlands, at the German and Danish North Sea coast, in Norway and in the western Baltic (Denmark, Swedish west coast, recently also in Germany), whereas the third sub-species, *L. fuscus graellsii*, occurs in western Europe (UK, Iceland, France, Portugal and Spain). The European breeding population of all three subspecies is large (>300,000 bp) and increased since the 1970s. However, there has been a long-term decline of *L.f. fuscus* in the eastern parts of the range. The world population of this subspecies was about 15 000 bp around the year 2000, of which 45% bred in Finland and 35% in Sweden.

In the Baltic Sea area, *Larus fuscus intermedius* breeds at the Swedish West coast and the Danish Kattegat with a stable population, and has started to colonize the Baltic coast of Schleswig-Holstein (Germany) in 2001.

SPECIES INFORMATION SHEET *Larus fuscus fuscus*

Distribution and status in the Baltic Sea region

The largest breeding populations of the nominate subspecies of the lesser black-backed gull in the Baltic Sea area are found in Finland, Sweden and Russia (St Petersburg region). There it has suffered a strong long-term decline since the 1970s.

In **Sweden**, *L. fuscus fuscus* almost exclusively breeds at the Baltic coast where it has shifted its distribution towards the north. The population counted 17 000 bp in the 1970s, today only 7 000–13 000 bp have left. However, there are indications for a population increase during the last *c.* 5 years.

Strong declines have been observed in **Finland**. These declines commenced on the southern coast. The Finnish population was 20 000 bp in the 1960s, of which only 7 000 have remained today. The decline concerns both the coastal (5 000 bp) and the inland (2 000 bp) populations (Valkama *et al.* 2011).

In **Russia, St Petersburg** region, the lesser black-backed gull breeds on the islands in the Gulf of Finland with 300–500 bp.

In **Estonia**, the species breeds with 50–100 pairs; it has suffered a long-term decline (Elts *et al.* 2009).

In **Poland**, the lesser black-backed gull is a sporadic breeder. Single pairs probably bred during (1973?) 1983–1989 and 1992–1994 on the coastal lakes Gardno and Łebsko and 1991 near Świnoujście (Tomiałojć & Stawarczyk 2003).

At the **German** Baltic coast, the lesser black-backed gull is a rather recent breeding bird. The breeding birds in Schleswig-Holstein obviously belong to the sub-species *L.f. intermedius,* whereas the birds breeding in Mecklenburg-Western Pomerania are supposed to belong to the subspecies *L.f. fuscus*. However, a clear identification on subspecies level has never been done. The first breeding attempt in Mecklenburg-Western Pomerania was recorded in 1943 on the island Langenwerder, the next in 1974 on the island Greifswalder Oie. Since then, the species has bred in most years with 1–4 bp (Nehls 2006).

In **Denmark**, *Larus f. fuscus* has been once a numerous breeder on Bornholm, especially on the bird island Græsholm (Ertholmene) with up to 1,200 bp during the 1940s. Nowadays there are only 3–5 bp on this island (http://www.chnf.dk/fugle/yffugle_chroe.php) and some single pairs on other sites of Bornholm (Olsen 2010; http://Gulldk.blogspot.com/2010/08/baltic-Gull-larus-fuscus-fuscus-ad.html) . In the Danish western Baltic Sea area, *Larus f. fuscus* is a breeding bird on Saltholm in the Øresund near Copenhagen. The exact number of breeding pairs is unknown. Both subspecies *L.f. intermedius* and *L.f. fuscus* are breeding in this colony with a total of 80–240 bp (1993–2006). In 1999 it was estimated that the proportion of *L.f. fuscus* was 10–20%.

Table1: Population numbers of the lesser black-backed gull *Larus f. fuscus* in the Baltic Sea area. For population trends 0=stable, -=decreasing, --=strongly decreasing, +=increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	year		
Sweden	6 800–11 500	2010	?	-
Finland	7 000	2006-2010	-	-
Russia - PET	300–500	2009	-	-
Estonia	50–100	2003–2008	-	--
Poland	Sporadic breeder			
Germany - MV	1–4 (?)	2003–2009	0	+
Denmark	<100	2003–2009	-	--
Baltic Sea	**14 200–19 200**			

SPECIES INFORMATION SHEET

Larus fuscus fuscus

Distribution Map

SPECIES INFORMATION SHEET *Larus fuscus fuscus*

Habitat and ecology

This species breeds in colonies on coasts and lakes, *Larus f. fuscus* also as solitary pairs, especially on inland waterbodies. Currently, the colony size of the nominate *Larus f. fuscus* seldom exceeds 100 pairs. *Larus f. fuscus* is strictly insular, nesting on grassy treeless skerries in the Baltic archipelagos and on small rocks in lakes, solitary pairs also on wooded islets in the midst of trees. The western subspecies Larus f. intermedius nests within the urban environment, often in association with herring gulls, but for *Larus f. fuscus* the roof-nesting is exceptional and there is no association with herring gulls. The species is omnivorous, but *Larus f. fuscus* is predominantly fish-feeder. It also takes insects, crustaceans, worms, starfish, molluscs, seeds, berries, small mammals, eggs, even small birds. *Larus f. fuscus* is a long-distance migrant spending the winter in equatorial Africa, there becoming exposed to pesticides. Western forms seldom travel longer than to the Mediterranean – northern Africa.

Description of major threats

The population decline of the nominate lesser black-backed gull in the Gulf of Finland is caused by an exceedingly high chick mortality due to diseases and predation by herring gulls. In the 1980s and 1990s, 65–70% of chicks had degeneration in various internal organs (primarily liver), inflammations (mainly intestinal), and sepsis, the final cause of death (Hario & Rudbäck 1996). Most of the remaining chicks (the potential recruits) were taken by predatory herring gulls, so the fledging rate was only 0.02 chicks per pair. As the only African migrant among the Baltic gulls, the nominate lesser black-backed gull is especially prone to DDT and its metabolites. The DDE/PCB ratio in chick livers was significantly elevated in the 1990s, indicating an increased exposure to DDTs as compared with other Baltic and circumpolar seabirds. Similarly, in northern Norway blood residues of DDE were higher in *L. f. fuscus* than in the increasing *L. f. intermedius* (Bustnes et al. 2006).

A significantly lower proportion of chicks have been found diseased in the 2000s in the Gulf of Finland. This is a genuine change. The mean hepatic concentration of PCBs was not significantly smaller than previously, whereas those of DDE were, leading to a lower DDE/PCB ratio. This is the first record of an apparent lowering in some of the OC levels in nominate lesser black-backed gull chicks. The reduced rate of preyed-on chicks is supposed to be a result of the culling programme for predatory Gulls conducted over the entire central Gulf of Finland in 2004–2007. PCB levels in Baltic herring (*Clupea harengus*), the staple food of *L. f. fuscus* during the breeding time, have not decreased. However, with regard to the different OC profiles, it has been difficult to decisively attribute effects of different pollutants in wild birds due to the correlative nature of OCs (reviewed in Hario & Nuutinen 2011).

Assessment justification

The species is classified, according to the observed decline during the last 3 generations and the possible continuation of this trend, as Vulnerable (VU) (criteria A2abce).

Recommendations for actions to conserve the species

The exposure of the lesser black-backed gulls to pesticides in their African wintering areas seems to be a main factor affecting the population. Hence, stopping of inappropriate or even illegal application of such substances is a key element for the conservation of the species. Also, the efforts to reduce the levels of organochlorines in Baltic biota have to be continued. On the breeding grounds, measures to reduce the predation by herring gulls should be considered.

Hunting of *Larus fuscus* is allowed in Denmark and Germany. Since the subspecies are difficult to distinguish, it has to be assumed that hunting may also affect the nominate subspecies. Hence, hunting

of *Larus fuscus* should be stopped in all EU member states.

Common names

Denmark: Sildemåge, Estonia: Tõmmukajakas, Finland: Selkälokki, Germany: Heringsmöwe, Latvia: Reņģu kaija, Lithuania: Silkinis kiras, Poland: Mewa żółtonoga, Russia: Клуша, Sweden: Silltrut

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SPECIES INFORMATION SHEET *Mergus serrator* (wintering)

English name: **Red-breasted merganser**	Scientific name: ***Mergus serrator* (wintering population)**	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Human disturbance (G01.01, G01.02, G02), Alien species (I01), Competition and predation (I02), Contaminant pollution (H01), Other threat factors (Loss of specific habitat features, J03.01) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Hunting (F03.01), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Human disturbance (G01.01, G01.02, G02), Alien species (I01), Competition and predation (I02), Contaminant pollution (H01), Other threat factors (Loss of specific habitat features, J03.01) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Hunting (F03.01), Mining and quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria: **A2b**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex II B (DK, IE, MT, FI, SE)	
Protection and Red List status in HELCOM countries: *Hunting not allowed in all EU Member States (Annex II B).* Denmark: LC (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: LC, Finland: NT, Germany:"particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/*(Not threatened), Latvia: –, Lithuania: 4 (I, Indeterminate), Poland: EN, Russia: –, Sweden: LC (breeding)		

Range description and general trends

The red-breasted merganser has a circumpolar, Holarctic breeding distribution and occurs from Greenland and Iceland across East Siberia to North America, particularly within the boreal zone as well as in the tundra and temperate zone. Important wintering sites in Europe are located in the Baltic Sea, along the Norwegian Atlantic coast, in the Rhine delta in the Netherlands and along the French Atlantic coast. Besides, the species winters along the SW coast of Greenland, near Iceland and in the Black Sea and eastern Mediterranean Sea (Mendel et al. 2008, Wetlands International 2012). The flyway population wintering in NW and Central Europe was estimated at 170 000 birds (Wetlands International 2012).

Distribution and status in the Baltic Sea region

The red-breasted merganser is a regular and common winter and migration visitor in the Baltic Sea. Migrants from north and east begin to arrive in the Baltic Sea in September, but numbers peak in October-November. Some birds stay in the Baltic during winter, while others continue to wintering sites in the Netherlands and Britain. Spring migration mainly occurs in March and April (Skov et al. 2011). The most important wintering areas in the Baltic Sea are in the south-western part along the coasts of Denmark, Sweden, Germany and Poland as well as along the coast of Gotland and in the Gulf of Riga (Fig. **1**). Particularly in mild winters, large numbers winter in the eastern Baltic region (Švažas et al. 2001). The results of the recent Baltic coordinated survey indicated a strong decline of the winter population from c. 44 300 birds in 1988–1993 to 25 700 birds in 2007–2009, equivalent to 42% over 16 years. Numbers have strongly decreased in Denmark, along the German coast and in Polish, Russian,

Lithuanian, Latvian and Estonian waters. In contrast, much more red-breasted merganser were observed in Swedish waters in 2007–2009, equivalent to an increase of more than 200%, with largest numbers occurring along the east coast of Gotland (Durinck et al. 1994, Skov et al. 2011). In Estonia (total country), numbers of wintering birds in the period 1991–2008 first showed a moderate increase of 10–50%, but then decreased by 10–50% (Elts et al. 2009). In the German Baltic Sea area, wintering red-breasted merganser declined by 68% in the period 1988–2010 (J. Wahl, written).

Distribution Map

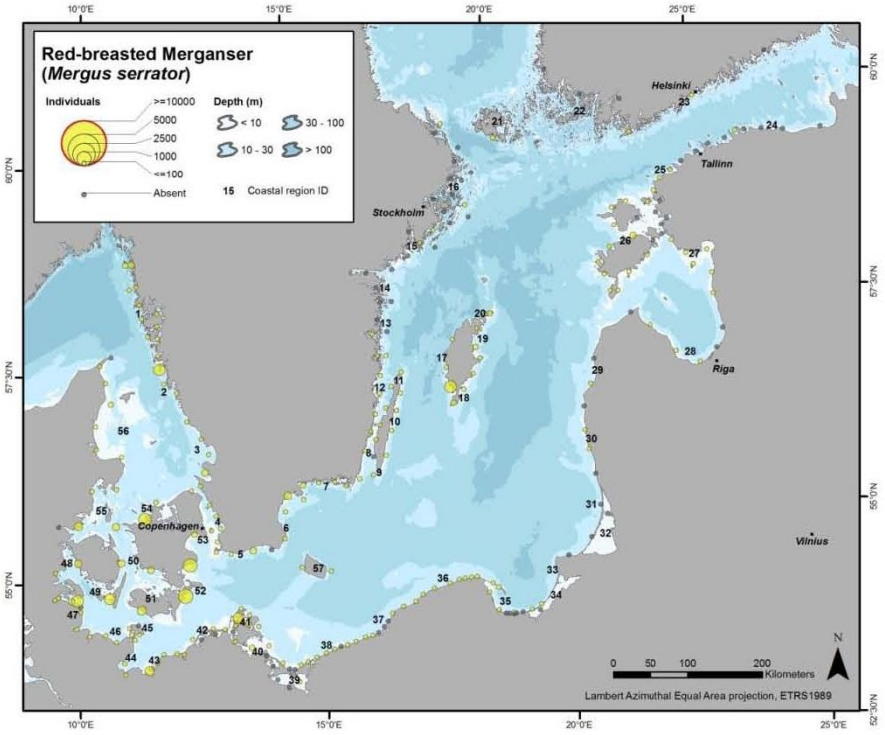

Fig. 1. Distribution and numbers of wintering red-breasted merganser *Mergus serrator* in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and ecology

Red-breasted mergansers breed in a variety of habitats along coasts, on inshore islands, in river mouths or inland lakes. The species mostly winters at sea, where it occurs in inshore and offshore waters as well as in estuaries, bays and brackish lagoons. In the Baltic Sea they use a wide range of shallow habitats up to 20 m water depth, including bays and lagoons, rocky coasts and archipelagos (Mendel et al. 2008, Skov et al. 2011). Wintering red-breasted mergansers are gregarious and winter in flocks up to a few hundred individuals. The diet in the Baltic Sea probably consists mainly of fish, but information is scarce. Birds from the Danish North and Baltic Sea were reported to mainly feed on small fish species, especially sticklebacks and gobies, supplemented by invertebrates (Madsen 1957). Wintering red-breasted mergansers often hunt in flocks.

Description of major threats

Although the reasons for the decline of the Baltic Sea winter population are not yet understood, various pressures were identified that have possibly caused or at least contributed to the observed declines.

In the breeding areas, the species is highly sensitive to **disturbance** near the nesting sites, especially by touristic and leisure activities like camping or aquatic sports. **Habitat degradation**, **water pollution, biocide contamination** and **predation** are further factors affecting the species in the breeding areas (see

Bauer et al. 2005, BirdLife International 2012). As the red-breasted merganser is listed under Annex II of the European Birds Directive, **hunting** is allowed in certain EU countries. Up to 3 700 birds are probably shot in Denmark each year (Bregnballe et al. 2006), while the annual hunting bag in the countries of the European Union is estimated at about 8 600 birds (Mooij 2005). In the Baltic wintering areas, intense **gillnet fisheries** impose a high risk of entanglement and drowning for diving bird species. In the Pomeranian Bay and the Greifswald Lagoon, where an intense set net fishery overlaps with important resting and feeding areas of red-breasted mergansers, bycatch of this species has been reported by Schirmeister (2003) and Bellebaum (2009). According to Žydelis et al. (2009), countries with the most frequent bycatch of the species in the Baltic Sea are Sweden and Poland. For Lake Ijsselmeer, an important wintering area in the Netherlands, van Eerden et al. (1999) estimated a yearly loss of 8 500 red-breasted merganser in gillnets. During winter, red-breasted merganser spend large proportions of time swimming on the water and often occur in large flocks of several hundred individuals. Thus, they are highly vulnerable to **oiling** and might suffer high losses in case of oil pollution in their main wintering areas. The **disturbance** distance of red-breasted merganser with regard to vessels is large and the birds usually take flight when a ship is approaching (Garthe et al. 2004). This pronounced sensitivity to **ship traffic** may cause the birds to avoid busy shipping lanes and thus influence the distribution of red-breasted merganser. Even in less frequently sailed areas, ship traffic may cause fragmentation and loss of suitable feeding and resting habitats. Due to the pronounced sensitivity of red-breasted merganser with regard to ship traffic, **offshore wind farms** and associated ship movements are likely to scare birds and thus may entail fragmentation and loss of habitats. Red-breasted mergansers are assumed to fly between different winter resting sites. During migration, the birds mostly fly in low altitudes. Hence, the species is at risk of colliding with offshore wind turbines and other obstacles, especially in unfavourable conditions with poor visibility. Barrier effects and habitat loss for red-breasted mergansers have been documented at wind farms in the North and Baltic Sea (summarised in Dierschke & Garthe 2006). Information on the diet of red-breasted merganser in the Baltic Sea is scarce, but they are likely to feed on benthopelagic prey (FTZ Büsum unpubl. data; see also Madsen 1957). Thus, the **reduction or destruction of bottom habitats** of their favorite prey species e.g. by sand and gravel extraction or by dredging activities for shipping channels and coastal development may decrease the food availability for the species.

Assessment justification

According to Durinck et al. (1994) and Skov et al. (2011) the population of red-breasted merganser declined from about 44 300 birds in the early 1990s to 25 700 birds in 2009, equivalent to a decrease of 46% over three generations (1993–2011; 18 years, GL = 6 according to the Swedish Red List), classifying the species as *Vulnerable* under criterion A2b. Numbers were decreasing in Danish, Polish, Russian, Lithuanian, Latvian and Estonian waters and in the eastern part of Germany. In Swedish waters, numbers were increasing, which is in concordance with the information from L. Nilsson (written), that red-breasted merganser wintering in Sweden were increasing in the period 1967–2012. However, the estimate for the species for Sweden given in Skov et al. (2011) is much too small and will make the total Baltic Sea estimate a little too low for the entire Baltic (L. Nilsson, written). Furthermore, numbers given by Skov et al (2011) for the Greifswald Lagoon might also be somewhat underestimated. However, to fall below the threshold of VU (30%), the current Baltic population has to be underestimated by 6 600 birds. According to Skov et al. (2011), about 5 300 birds were recorded in Swedish waters in 2007–2009, while 8 000 red-breasted merganser were estimated for the Swedish Baltic Sea area for 2009 (L. Nilsson, written). On the other hand, the estimate provided by Skov et al (2011) comprises about 1,300 birds from Bohüslän (Sweden), an area that was not included in Durinck et al. (1994). In Estonia, clearly distinguishable trends in the number of wintering birds were observed in the period 1991–2008: Numbers first showed a moderate increase of 10–50%, but then decreased by 10–50% (Elts et al. (2009). In the German Baltic Sea area, the species decreased by 68% in the period 1988–2010 (J. Wahl, written). The HELCOM CORESET trend data for the period 1991–2011 revealed a moderate decline of the Baltic Sea winter population. Summarising the information, the winter population of red-breasted mergansers in the Baltic Sea is declining. Based on the figures provided by Durinck et al. (1994) and Skov et al (2011),

the species is classified as *Vulnerable* under criterion A2b, as the causes of the reduction are not yet understood and the reduction may not have ceased. As the species has a very large range and a large population size, it does not approach the thresholds for a Red List Category under criteria B, C and D.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. In the wintering areas, reducing bycatch in fishing gear, the prevention of accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options that are likely to support the species. In the breeding areas, natural, undisturbed and unpolluted breeding and fledging habitats need to be ensured.

Common names

Denmark: toppet skallesluger, Estonia: rohukoskel, Finland: tukkakoskelo, Germany: Mittelsäger, Latvia: garknābja gaura, Lithuania: vidutinis dančiasnapis, Poland: szlachar, Russia: Средний крохаль, Sweden: småskrake

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SPECIES INFORMATION SHEET *Philomachus pugnax*

English name: **Ruff**	Scientific name: ***Philomachus pugnax***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 4 years	
Past and current threats (Habitats Directive article 17 codes): Extra-regional threats (e.g. hunting; XE), Overgrowth of open areas (A04.03), Ditching (J02.01.01, J02.05), Climate change (M), Alien species (I01), Competition and predation (I02)	Future threats (Habitats Directive article 17 codes): Extra-regional threats (XE), Overgrowth of open areas (A04.03), Climate change (M), Alien species (I01), Competition and predation (I02)	
IUCN Criteria: **A2abcd**	**HELCOM Red List Category:**	**VU Vulnerable**
Global / European IUCN Red List Category (BirdLife International 2004) LC / LC	Annex I EU Birds Directive: yes	
	Annex II EU Birds Directive: II B (FR, IT, MT)	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: EN, Estonia: EN, Finland: EN, Germany: 1 (Critically endangered), Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: EN, Russia: –, Sweden: VU		

Range description and general trends

The ruff is a widespread breeder in much of northern Europe. The European breeding population amounts more than 200 000 reproductive females. Russia, northern Finland and Sweden are hosting the key populations. In Western Europe, the range of the species reaches to France and the UK.

The ruff is declining in all parts of Europe, but the decline is especially dramatic in the western and southern areas of the range of the species, where it currently is close to extinction (BirdLife International 2004). There is obviously a strong and rapid redistribution of the range towards the east (Rakhimberdiev *et al.* 2011). The ruff is also declining in its northern European core areas. In Norway, only 1 100–1 850 nesting females have been estimated in 2009, which means a reduction of 80% compared to the population numbers of 1990. The breeding range also has been reduced (Øien & Aarvak 2010). A similar trend has been observed in European Russia (Rakhimberdiev *et al.* 2011).



Philomachus pugnax. Pictures by Christopher Plummer (left), Hans Glader (middle) Lech Karauda (right).

SPECIES INFORMATION SHEET *Philomachus pugnax*

Population development in the Baltic Sea area

Despite the declining trend, the ***northern parts*** of the assessment area (north of 60° Lat.) still host considerable population numbers. The **Swedish** population counts about 16 000–35 000 breeding females in the northern Tundra areas, but also a few (*c.* 15 bf) at the northern Baltic coasts (Norrbotten änd Västerbotten). In **Finland**, the total population is about 5 000–8 000 breeding females; it has suffered a decline of 47% within 10 years. Not more than 500 females are breeding in coastal areas. Both the coastal and Tundra populations are declining. In the **St. Petersburg** region, a population minimum has been observed in the 1980s, but during the last 10 years the number of reproductive females is slowly increasing. However, there are considerable annual fluctuations.

In the ***southern parts of the Baltic*** (south of 60° Lat.), the decline of the ruff is dramatic. During the 19th and at the beginning of the 20th century the species was still a widespread and common breeding bird on coastal meadows and marshlands. However, during the whole 20th century the ruff has suffered a continuous decline and has disappeared or almost disappeared from many parts of its former range.

The southern **Swedish** population is small: Gotland 10–15 reproductive females in 2006, (111 in 2001), Öland 12 in 2008 (278 in 1988) and Skåne *c.* 5 (*c.* 50 in 1998), giving a total of *c.* 35 reproductive females. The decline in the southern Swedish areas is dramatic: on Öland, for instance, the population has reduced by 95% between 1988 and 2008 (Tjernberg & Svensson 2007; Ottvall *et al.* 2009).

In the Kaliningrad region of **Russia**, the ruff is currently a rare, probably not permanent breeder.

The **Lithuanian** Breeding Bird Atlas (Kurlavičius 2006) gives an estimate of 100–200 bf for the period 1995–2000. However, the current estimate is *c.* 100 bf only. The Nemunas Delta is the last permanent, stable breeding area in Lithuania.

In **Poland**, the breeding distribution of the ruff is more inland than coastal. Once it was a widespread breeder, mainly in the northern part of the country. The Biebrza Marshes have been probably the most important breeding place. In the 1970s and early 1980s the Polish population counted still 300–400 reproducing females, but this population declined rapidly to 150–200 during the mid-1980s and <50 in 1997/98 (Tomiałojć & Stawarczyk 2003; Sikora *et al.* 2007). After 2000, there have been only two confirmed breeding records around Zagórów (Warta river valley, central Poland).

In **Germany**, the trend is strongly negative. The species probably got extinct at the end of the 1990s at the Baltic coast of Schleswig-Holstein and declined in Mecklenburg-Western Pomerania from 60–70 in the 1980s to 1–2 in recent years. In 2012, the ruff was missing as a breeding bird. The trend of the population development as shown in Figure for Mecklenburg-Western Pomerania is probably representative for the whole southern Baltic.

SPECIES INFORMATION SHEET *Philomachus pugnax*

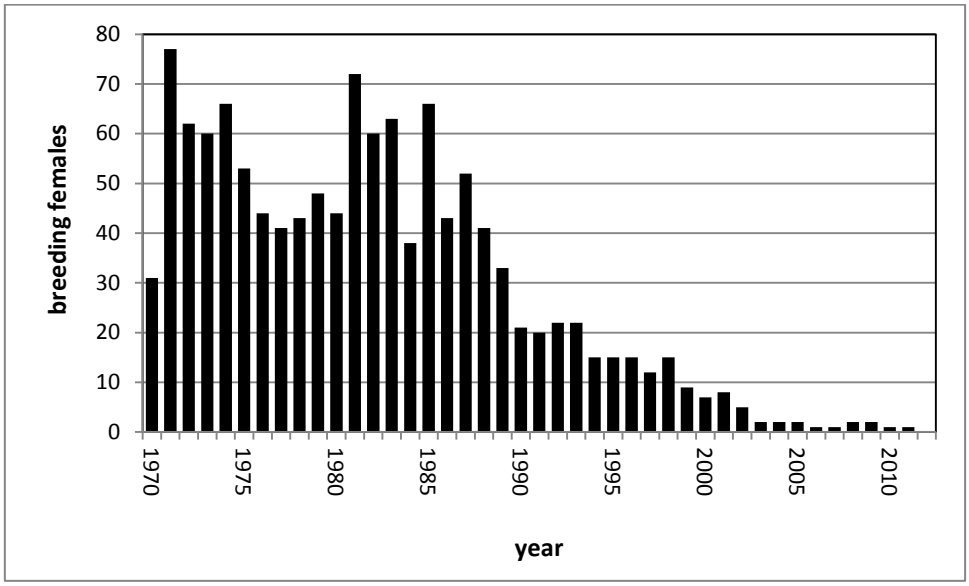

Figure 1: Population development of the ruff in Mecklenburg-Western Pomerania 1970–2012.

The **Danish** population has been continuously declining during the last 5 decades, and an extremely rapid decline has been observed since the mid-1990s (Sørensen 2011, Thorup 2004 and unpublished):

Table 1: The population development of the ruff in Denmark.

	1964–1972	**1986–1988**	**2009–2010**
Baltic	594	303	20
North Sea	661	567	43
Denmark total	1 255	870	63

Table 2: The current population of the ruff in the southern Baltic Sea area (south of 60° Lat.). The total figure even could be an overestimation, since there are no actual data available for Latvia. For population trends -=decreasing, --=strongly decreasing, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding females	**Year**		
Sweden (southern Baltic coasts)	35	2010	--	--
Estonia	20–50	2003–2008	-	--
Latvia	50–200	1990–2000	--	--
Lithuania	100	2006	?	--
Russia, KAL	0–2	2009	?	-
Poland	0–2	2000–2010	--	--
Germany - SH	0	2009		--
Germany - MV	1–2	2003–2011	--	--
Denmark	20	2009–2010	--	--
Southern Baltic	**225–410**			

SPECIES INFORMATION SHEET *Philomachus pugnax*

Distribution Map

SPECIES INFORMATION SHEET *Philomachus pugnax*

Habitat and ecology

The ruff breeds on marshlands and coastal meadows, and, in the archipelagos of the northern Baltic, on grassy treeless islets. The nest is a shallow ground scrape, lined with grass leaves and stems, and concealed with marsh plants or grass. Nesting is solitary, although several females may lay in the vicinity of a mating area (lek). Males display during the breeding season at a lek in a traditional open grassy arena. Territorial males are very site-faithful; 90% return to the same lekking site in the subsequent seasons, the most dominant males being the most likely to reappear (Widemo 1997). Ruffs show a high level of polyandry, i.e. the females are mating with different males. More than half of female ruffs mate with, and have clutches fertilised by, more than one male. Males do neither breed nor support the rearing of chicks.

Description of major threats

The reasons for the decline are not well understood, but habitat deterioration by intensified use of meadows, overgrowth of open habitats and ditching of mires, predation and hunting have been suggested. In Denmark, several breeding sites were lost due to embankment and hydrology control projects during the 1960s, and large areas of former ruff breeding habitat were converted into cultivated fields. However, ruffs did extremely well in the 1980s in the remaining areas, whereas in the last 10–15 years they have declined dramatically. It is still not well understood why ruffs (and most other meadowbirds) did so well in the 1980s. The recent declines are primarily due to bad habitat management in many of the previously best Danish breeding areas, together with the general decline of the European breeding population. Recent findings give evidence for a large-scale population shift of the ruff from the European and Russian European Arctic breeding sites towards the east, which has been attributed to a loss of habitat quality in the main staging sites in the Netherlands (Rakhimberdiev et al. 2011).

The vast majority of Eurasian ruffs winter in West African floodplains, where large numbers are captured and shot. Total catch has varied between 10 and 60% of the wintering stock, with the highest rate in dry years. However, catch variation due to deflooding cannot explain the steep decline throughout the 20th century (Zwarts et al. 2009), whereas heavy bias against females in the catch presumably is a contributing factor.

Assessment justification

The reduction of population size of the total Baltic population of the ruff during the last 10 years has been probably >30%. The species is classified as Vulnerable (VU) according to criterion A2abcd.

Considering only the southern parts of the Baltic range, the decline has been even more dramatic and exceeds 50% of the population size during the last 3 generations. Hence, the population of this area even meets the criteria for Endangered (EN A2abcd, C1).

Recommendations for actions to conserve the species

The main conservation action is the adjustment of the optimisation of the remaining breeding sites to the habitat requirements of the ruff. This includes both grazing and water management. Control of predatory mammals is also essential. Furthermore, the staging areas at the North Sea, especially in the Netherlands, play an essential role for the western European population. Efforts must be undertaken to improve the quality of these sites.

Hunting should be banned; the species should be deleted from Annex II of the EU Birds Directive.

Common names

Denmark: Brushane, Estonia: Tutkas, Finland: Suokukko, Germany: Kampfläufer, Latvia: Gugatnis, Lithuania: Gaidukas, Poland: Batalion, Russia: Турухтан, Sweden: Brushane

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SPECIES INFORMATION SHEET *Podiceps auritus*

English name: **Slavonian grebe**	Scientific name: ***Podiceps auritus***	
Taxonomical group: Class: Aves Order: Podicipediformes Family: Podicipedidae	Species authority: Linnaeus, 1758	
Subspecies,Variations,Synonyms: *Podiceps auritus auritus;* horned grebe	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Intensive fish farming (F01.01), Contaminant pollution (H04.01, H04.02), Alien species (I01), Competition and predation (I02), Extra-regional threats (XO) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	Future threats (Habitats Directive article 17 codes): Breeding: Intensive fish farming (F01.01), Contaminant pollution (H04.01, H04.02), Alien species (I01), Competition and predation (I02), Extra-regional threats (XO) Wintering: Bycatch (F03.02.05), Oil spills (H03.01), Mining & quarrying (C01.01), Construction (C03.03, D03.03), Water traffic (D03.02)	
IUCN Criteria breeding: **A2abce**	**HELCOM Red List Category breeding:**	**VU Vulnerable**
IUCN Criteria wintering: **D2**	**HELCOM Red List Category wintering:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex I	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: RE, Estonia: NT, Finland: VU, Germany:"strictly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/R (Extremely rare), Latvia: –, Lithuania: 1 (E, Endangered), Poland: –, Russia: –, Sweden: NT (breeding)		

Range description and general trends

The slavonian grebe is distributed from North Europa to Kamchatka and from Alaska to Newfoundland. The European breeding population counts < 11 000 bp. The largest populations are found in Finland, Russia, Norway, Sweden and Estonia. European birds belong to the subspecies *Podiceps auritus auritus*. Two variants are distinguished due to differences in the shape of the bill: the thick-billed morph breeds in Norway, Iceland, Scotland and the Faroe Islands and winters along the coasts within its breeding range. The thin-billed morph breeds in Finland, Sweden, the Baltic States and areas further east in NE Europe. It winters in the southern part of the Baltic Sea, along the Atlantic and North Sea coasts from Norway to North France as well as in the Mediterranean Sea and Black Sea (Fjeldså 1973, Wetlands International (2012). The thin-billed NE European winter population was estimated at 14 200 to 26 000 birds (Wetlands International 2012).

SPECIES INFORMATION SHEET *Podiceps auritus*

Podiceps auritus breeding plumage (left, photo by Jannica Haldin) and winter plumage (right, photo by Nicole Sonntag).

Distribution and status in the Baltic Sea region

Breeding

The slavonian grebe mainly breeds in Finland, Sweden, Estonia and the St Petersburg Region of Russia. The Finnish and Swedish populations have been declining recently.

The total **Swedish** population has been estimated at 1 900–2 500 bp during the inventories of 1969 and 1972. However, this population has almost halved by 1996 (Tjernberg & Svensson 2007). The decline during 1990–2000 was estimated at 20–29% (BirdLife International 2004), but after that only a small reduction has been noted (around 5% during the period 1995–2010). The current population is estimated at 1 000–1 400 bp, of which 45 pairs are breeding at the coast.

In **Finland**, the decline was about 30% from 1990 to 2000 (BirdLife International 2004), but has exceeded 50% since then. In Finland and Sweden, the population declines concerns mainly the inland population, whereas coastal populations are thriving and expanding.

In the **St Petersburg Region** of Russia, the population was estimated at 200–600 bp in 2009/2010. The short-term trend seems to be positive, the long-term trend, however, is unknown.

The **Estonian** population has declined from the 1970s until the 1990s, but this trend obviously has levelled off. For 1998–2002 and 2003–2008 the population was estimated at 200–400 bp (Elts *et al.* 2003; 2009).

In the southern Baltic, the slavonian grebe is a sporadic breeder. **Latvia** holds some tens of pairs with possibly a declining trend (BirdLife International 2004). In **Lithuania**, the only confirmed breeding dates to 1997. However, observations during the breeding season (mainly on commercial fishponds in different parts of the country, especially in Varena, Kelme, Salcininkai and Vilnius districts) suggest regular breeding. The population is estimated at 1–10 bp (Kurlavičius 2006).

In **Poland**, the slavonian grebe appears occasionally as a sporadic breeder in the north-east of the country. Single pairs bred in 1972 near Augustów, and in 1981, 1985 and 1988 near Białystok. Sightings during the breeding season, but without confirmation of nesting, have been reported from Siedlce (1995) and near Toruń (1996; Tomiałojć & Stawarczyk 2003; Sikora et al. 2007).

In **Germany, Schleswig-Holstein**, the slavonian grebe bred for the first time in 1981; during the 1980s and 1990s single pairs have been breeding in most years (Berndt et al. 2002). The last successful breeding record dates to 1999, the last sighting during the breeding season to 2004 (Berndt 2007; Koop et al. 2009). From Mecklenburg-Western Pomerania, no breeding has been reported so far.

In **Denmark**, breeding was suspected in 2000 and 2001 (2 and 1 bp, respectively), but there was no proven record (Grell et al. 2004), and no signs of possible breeding during the following years.

Table 1: Population numbers of the slavonian grebe in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, (-)=(probably) slightly decreasing, (+)=slightly increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	1 000–1 400	2010	(-)	-
Finland	1 500	2008–2009	-	?
Russia, PET	200–600	2009–2010	+	?
Estonia	200–400	2003–2008	(0)	-
Latvia	20–50	1990–2000	?	(+)?
Lithuania	1–10	1999–2001	0	+
Poland	Sporadic, single pairs			
Germany, SH	Sporadic, single pairs			
Denmark	Sporadic, single pairs			
Baltic Sea	**2 900 – 4 000**			

Wintering

Slavonian grebes wintering in the Baltic Sea mainly originate from birds breeding in northeastern Europe (Wetlands International 2012), with largest breeding populations found in Finland, Sweden, Russia and Estonia (see above). The Baltic Sea is the most important wintering area of slavonian grebes in NW Europe. After leaving their freshwater breeding sites, slavonian grebes start their migration to the Baltic Sea, with peak numbers in October to November. Spring migration begins in March, but some birds remain in the northern Baltic Sea until May.

The main wintering area in the Baltic Sea is the Pomeranian Bay, where large numbers are particularly found on and around the Odra-Bank (Sonntag et al. 2009). In 2007–2009, birds were only observed in eastern German and Polish waters, with the majority of birds (83%) occurring in the Pomeranian Bight. Besides, significant numbers were only found in the Gulf of Gdansk (Skov et al. 2011). In contrast to the survey in the early 1990s, no birds were observed in Russian, Lithuanian and Latvian waters in 2007–2009 (Fig. 2). However, studies in German waters revealed small winter populations in the western parts of the German Baltic Sea (see Mendel et al. 2008, Sonntag et al. 2009), which are not indicated by Skov et al. (2011). Besides, wintering numbers between the two comprehensive surveys increased from 1 830 birds in 1988–1993 to 2 890 birds in 2007–2009, equivalent to an increase of 58% over 16 years.

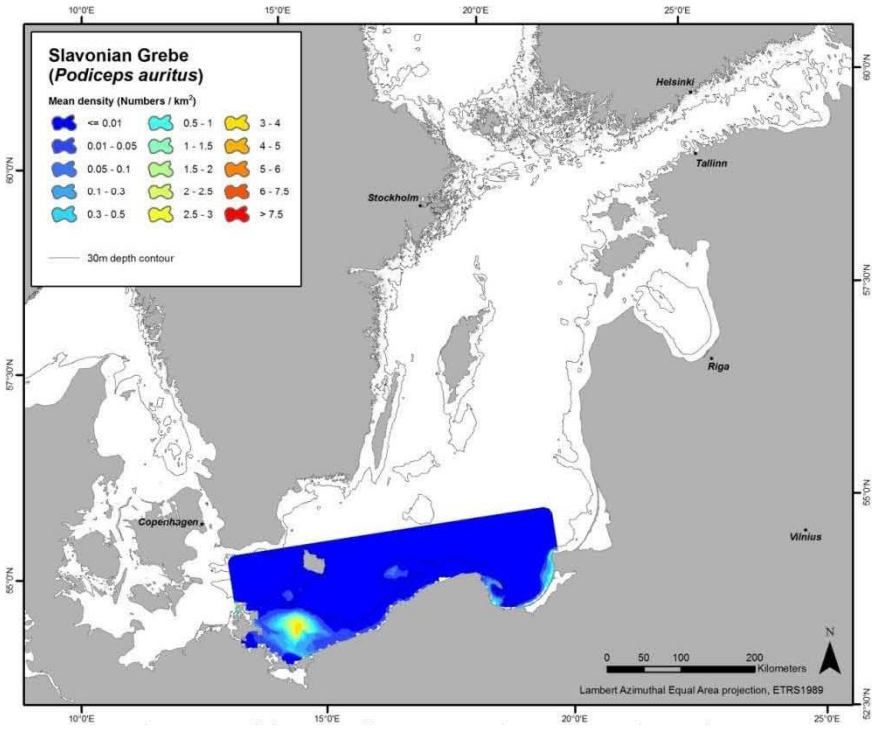

Fig. 2. Distribution and density of wintering slavonian grebes (*Podiceps auritus*) in the Baltic Sea, 2007–2009. From Skov et al. (2011).

Habitat and ecology

As **breeding** bird, the slavonian grebe inhabits shallow waters with luxuriant emergent and submerged vegetation and with small open water areas. Most of these environments are heavily eutrophicated. Besides small inland lakes and pools, brackish bays and lagoon-like areas along the Baltic coast are also used. Oligotrophic and dystrophic lakes are less preferred, and the clutch size tends to be smaller there, probably due to food shortage (Ulfvens 1988). In the Quark of Finland, the reproduction rate is found to be higher in coastal environments compared to inland waterbodies (well-grown brood size 2.9 vs. 1.5; Ulfvens 1989). In coastal areas, winter losses (locally up to 50%) are rapidly compensated (within 4–5 years, Ulfvens 1989), whereas the decreasing trend tends to be more persistent in lake areas.

During the **non-breeding** season, the slavonian grebe is predominantly found in marine and brackish waters as well as on larger lakes and rivers (Mendel et al. 2008). In its most important wintering area in the Pomeranian Bay, the habitat selection is significantly influenced by water depth and bottom sediment type. The grebes prefer shallow waters of up to 14 m depth and occur only over sandy sediments (Sonntag et al. 2009). The food in the wintering areas mainly consists of small fish, which is caught up to 20 m depth (Fjeldså 2004). In the Pomeranian Bay, demersal gobies are the main prey species (Sonntag et al. 2009).

Description of major threats

The reasons behind the decline of the breeding populations are probably related, *inter alia*, to **food competition with fishes** (Andersson 1982, Douhan 1998, Stedman 2000), hazards in wintering areas, and in inland waters also to **water acidification**. **Predation** by invasive predatory mammals (*e.g.* Mink, Raccoon Dog) also plays a role. These factors are expected to affect the slavonian grebe population also in the future.

In the wintering areas, various factors are likely to impose a threat on slavonian grebes:

In the Baltic wintering areas, intense **gillnet fisheries** impose a high risk of **entanglement** and **drowning** for diving bird species. In the Pomeranian Bay, the most important wintering area of slavonian grebes, intense set net fisheries are operated in the coastal zones as well as offshore and overlap with the resting and feeding areas of slavonian grebes. Hence, the birds are particularly susceptible to becoming entangled in the nets while diving for their preferred prey near the sea bottom. Bycatch has been reported e.g. for the German part of the Pomeranian Bay (see Sonntag et al. 2009). Slavonian grebes are concentrated in the Pomeranian Bay and are particularly numerous in the Odra Bank area. This, as well as the habit of Slavonian grebes to spend large proportions of time swimming on the water, render them highly vulnerable to **oil pollution** in the area (Mendel et al. 2008). Slavonian grebes are very sensitive to **disturbance by ship traffic**. Although disturbance distance with regard to vessels is fairly short, the birds usually flee from approaching ships (Garthe et al. 2004, FTZ Büsum unpubl. data). This pronounced sensitivity to shipping movements may cause fragmentation and loss of suitable feeding and resting habitats. In their wintering areas at sea, slavonian grebes mostly move by swimming, but are assumed to fly between different resting sites. Migration movements usually occur at night, and the species has only moderate flight manoeuvrability. Hence, slavonian grebes are particularly at risk of colliding with **offshore wind turbines and other obstacles**, especially in unfavourable conditions with poor visibility. In the Pomeranian Bay, slavonian grebes feed mostly on benthic organisms and occur predominantly in areas with sandy sediments (Sonntag et al. 2009). Thus, the **reduction or destruction o**f such **bottom habitats**, e.g. by sand extraction or by dredging activities for shipping channels and coastal development, may decrease the food availability for the species.

Assessment justification

Breeding

Within the last 15 years the declining trend of the slavonian grebe has been strong, especially in Finland (>50%). In Sweden, only a slight decline has been observed; however, the overall decline is estimated to exceed 30% during 3 generations (15 years) in the main breeding areas. The species is classified as *Vulnerable* (VU) according to criterion A2abce.

Wintering

The results of the two Baltic Sea surveys indicate an increase in the number of slavonian grebes wintering in the Baltic Sea from 1988–1993 to 2007–2009, equivalent to an increase of 54% over three generations (15 years, GL = 5 according to the Swedish Red List). In contrast to the survey in the early 1990s, no birds were observed in Russian, Lithuanian and Latvian waters in 2007–2009. This might indicate a restriction of the area of occupancy in the Baltic Sea wintering area. However, studies in German waters revealed small winter populations in the western parts of the German Baltic Sea (see Mendel et al. 2008, Sonntag et al. 2009), which are not indicated by Skov et al. (2011). There is scarcely any information about winter population trends. Only coastal counts in the Kattegat area allowed for trend calculation, revealing a significant positive trend in the period 1987–2009 with annual increases of 7.7% (Skov et al. 2011). Birds wintering in the German part of the Baltic Sea showed an uncertain trend for the period 2000–2007 (Dries & Garthe 2009). Although the breeding population in the most important areas has been decreasing during the last two decades (see above), the winter population in the Baltic Sea showed a marked increase and does thus not apply for a Red List classification under criterion A and C. Criterion B does not apply, as the extent of occurrence and the area of occupancy are higher than the respective threshold values, based on information in Durinck et al. (1994), Sonntag et al. (2009) and Skov et al. (2011). However, due to the small population size, the species classifies as *Near Threatened* (NT) according to criterion D2 (number of locations less than ten, imaginable threat that can make the species capable of becoming VU or EN within a very short time, e.g. oiling). If the population decline in the breeding areas continues, numbers wintering in the Baltic Sea are likely to decrease in the

next years and the species may then qualify for a higher threat category in the Red List of wintering birds.

Recommendations for actions to conserve the species

As probably only the cumulative effects of the various threat factors eventually drive the dramatic decline, various management measures need to be considered. At the breeding sites, control of predatory mammals may be an appropriate conservation action. In the wintering areas, measures to reduce the by-catch are required (e.g., avoidance of set net fisheries during the migration and wintering period), general effort to reduce accidental and chronic oil pollution, preservation of feeding grounds and ship traffic regulations are some options that are likely to benefit the species.

Common names

Denmark: nordisk lappedykker, Estonia: sarvikpütt, Finland: mustakurkku-uikku, Germany: Ohrentaucher, Latvia: ragainais dūkuris, Lithuania: raguotasis kragas, Poland: perkoz rogaty, Russia: Красношейная поганка, Sweden: svarthakedopping

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SPECIES INFORMATION SHEET *Actitis hypoleucos*

English name: **Common sandpiper**	Scientific name: ***Actitis hypoleucos***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Potentially overgrowth of open areas (A04.03, K02), Alien species (I01), Tourism (G01), Extra-regional threats (XE)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03, K02), Alien species (I01), Tourism (G01), Extra-regional threats (XE)	
IUCN Criteria: **A2ab**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive - no Annex II EU Birds Directive - no	
Red List status in HELCOM countries: Denmark: –, Estonia: –, Finland: NT, Germany: 2 (Endangered), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: NT		

Range description and general trends

The common sandpiper is a widespread breeding bird across much of Europe. The European breeding population counts >720 000 bp. Although the population has been stable in much of its range, it has suffered significant declines in some of the key areas, especially Sweden and Finland.

Actitis hypoleucos. Photos by Christoph Moning (above) and Andrei Frenkel (below).

Distribution and status in the Baltic Sea region

In the western Baltic (Denmark, German Federal states Schleswig-Holstein and Mecklenburg-Western Pomerania) the common sandpiper is only a sporadic and rare breeder. The largest populations are found in the eastern and northern parts of the Baltic Sea (Estonia, Russia, Finland, Sweden), where the species inhabits inland waters as well as the coast.

In **Sweden**, the common sandpiper has suffered a long-term decline. According to Ottvall *et al.* (2009), the species has declined by 30–49% during the last 30 years, and 10–19% during the last 10 years.

Finland hosts by far the largest number of breeding pairs in the Baltic Sea area. According to BirdLife International (2004), the species was declining during 1990–2000 by *c*. 20%, and by 2009 the decline

amounts to 33% for the previous 15 years. The decline was revealed by line transect censuses (an annual mean decrease of 1.4% during 1975–2008), but is supported by the Archipelago Bird Census scheme as well, based on nest counts (decreased by 1.8% per annum in 1986–2010, being now 1,800 bp).

In **Russia, Estonia**, **Latvia** and **Lithuania**, the common sandpiper is a common breeding bird with several thousand pairs. The populations in Russia, Estonia and Latvia seem to be stable, whereas for Lithuania the trend is unknown.

In **Poland**, the common sandpiper is a widespread, but scarce breeder. The largest populations are recorded in the lower parts of the Narew (100 bp), Pilica (90 bp) and Bug (70 bp). In the Przemyśl region the species has been recorded with densities of up to 6–16 bp / 10 km river. The highest breeding sites are found in the Tatra Mountains at 1200 m altitude (Sikora *et al.* 2007). There is no clear evidence for a recent decrease, but on a long run it must have declined (Tomiałojć & Stawarczyk 2003).

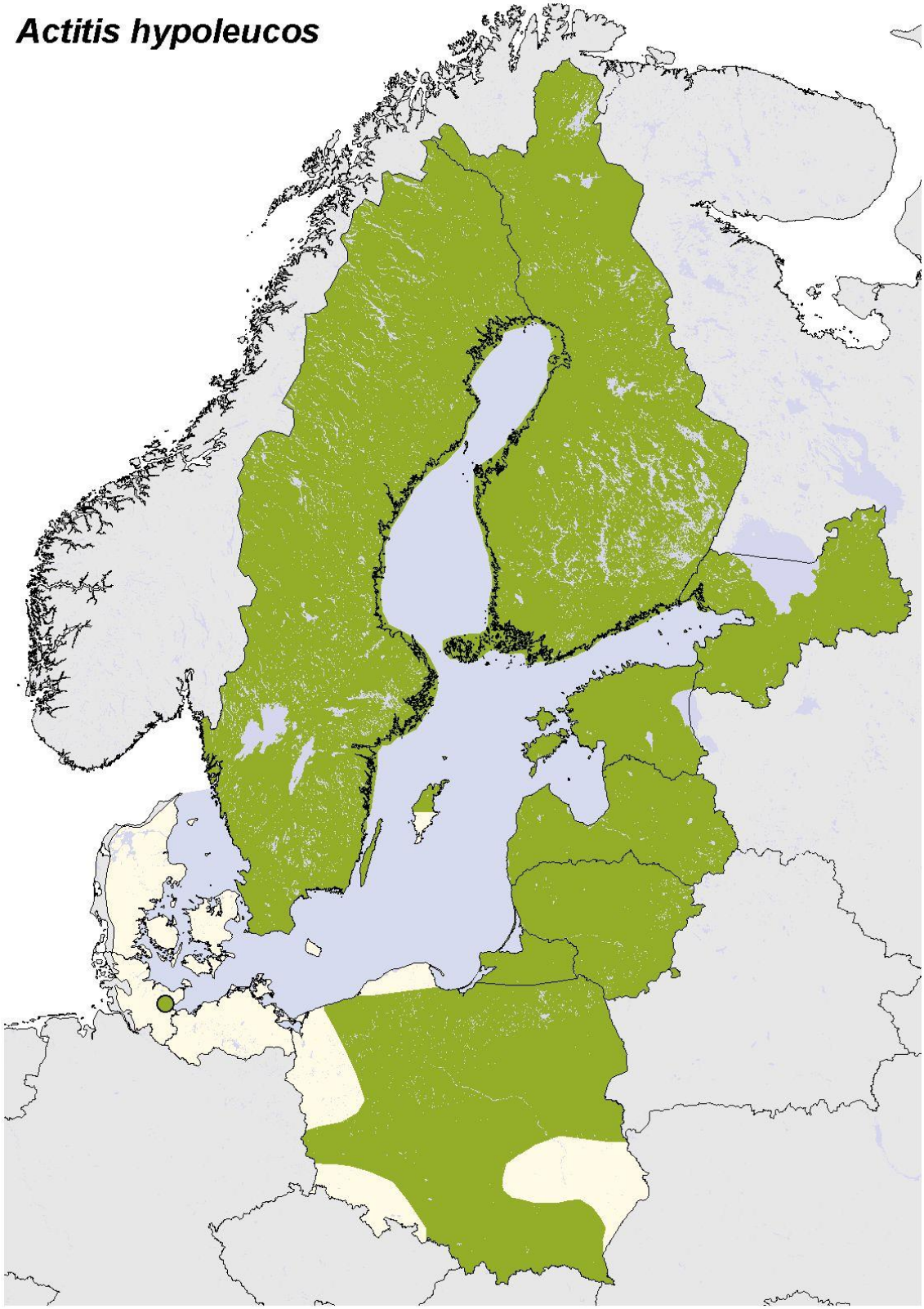
In the south-western Baltic (**Germany, Denmark**), true breeding records are rare, the common sandpiper is obviously a rare, probably only sporadic breeder (Berndt *et al*. 2002, Prill 2006).

Table 1: Population numbers of the common sandpiper in the Baltic Sea area. For population trends 0=stable, -=decreasing, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	77 000–144 000	2010	-	-
Finland	100 000–200 000	2009	-	?
Russia, PET	common	2010	0	0
Russia, KAL	200–300	2010	0	0
Estonia	5 000–10 000	2003–2008	0	0
Latvia	3 500–5 000	1990–2000	0	0
Lithuania	1 500–2 000	1999–2001	?	?
Poland	1 000–2 000	1995–2002	?	-
Germany - SH	Sporadic, single pairs			
Germany - MV	Sporadic, single pairs			
Denmark	Sporadic, single pairs			
Baltic Sea	**189 000–363 000**			

SPECIES INFORMATION SHEET *Actitis hypoleucos*

Distribution map



SPECIES INFORMATION SHEET *Actitis hypoleucos*

Habitat and ecology

In Finland, the common sandpiper is still the most abundant wader and found in all kinds of freshwater habitats throughout the country. Along the shores of the Baltic brackish waters it is common in the inner archipelagos, but is scarce or lacking in the barren outer archipelago. There is no apparent change in the overall distribution in the country.

Description of major threats

Factors leading to the decline of the Baltic population of common sandpiper are largely unknown. There are no such habitat losses that could explain the numeric decline of the widespread species, and no systematic contraction in range can be seen either. Overgrowth in inner archipelagos may play a role, and locally the species might have suffered from waterway regulations. The increase of mammalian and avian predators probably bears an effect on breeding results. Yet, there are no population studies that could cast light on the possible long-term fluctuations of the species. European birds overwinter south of the Sahara, where birds can face the problems of vanishing marshlands and the increasing threat of being captured.

Assessment justification

Since Sweden and Finland host about 90% of the breeding population of the assessment area, the trend in these two countries is decisive for the Red List classification. The decline obviously exceeds 15% during the time span of 3 generations (15 years), but obviously does not reach 30%. Hence, the species classifies as *Near Threatened* (NT) according to criteria A2ab.

Recommendations for actions to conserve the species

Almost nothing is known about the natural fluctuations of common sandpiper populations. A proper monitoring programme aiming at discovering the variation in productivity and adult survival is needed both in Sweden and in Finland. As a first step, an analysis on the pan-Baltic ringing data should be conducted to pinpoint mortality factors, including the possible capture pressure outside the breeding range.

Common names

Denmark: oeverloper, Estonia: vihitaja e. jõgitilder, Finland: rantasipi, Germany: Flussuferläufer, Latvia: upes tilbīte, Lithuania: krantinis tilvikas, Poland: brodziec piskliwy, Russia: Перевозчик, Sweden: drillsnäppa

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SPECIES INFORMATION SHEET *Aythya fuligula*

English name: **Tufted duck**	Scientific name: ***Aythya fuligula***	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Other threat factors (declining colonies of *L. ridibundus*; J03.01), Tourism (disturbance; G01, G02), Alien species (I01), Competition and predation (I02), Hunting (F03.01), Bycatch (F03.02.05), Oil spills (H03.01)	Future threats (Habitats Directive article 17 codes): Other threat factors (declining colonies of *L. ridibundus*; J03.01), Tourism (G01, G02), Alien species (I01), Competition and predation (I02), Hunting (F03.01), Bycatch (F03.02.05), Oil spills (H03.01)	
IUCN Criteria: **A2ab**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive-no Annex II EU Birds Directive-II A	
Red List status in HELCOM countries: Denmark: LC, Estonia: LC, Finland: VU, Germany: * (*Not threatened), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: LC		

Range description and general trends

The tufted duck is a widespread breeder across much of Europe. The European population counts >730 000 bp. Although the species was stable or increased in much of its range during 1990–2000, there were declines in north-eastern Europe, including the north-eastern Baltic Sea.

*Aythya fuligula***.** Photo by Lutz Ritzel.

Distribution and status in the Baltic Sea region

The size of the breeding population is much smaller in the western Baltic Sea area than in the north-eastern parts of the region.

The **Swedish** population has been stable both in short-term and long-term (Ottvall *et al.* 2009). It is currently estimated at 73 000–94 000 bp and is considered as "secure" (Ottosson *et al.* 2012). However, there are considerable regional differences. In the coastal parts of the Baltic Sea it has obviously declined. For example, it decreased by 71% in the Stockholm archipelago 1975–2000 (from 5 800 to 1

700 pairs). Also in Västerbotten it has decreased since the beginning of the 1990s.

Finland hosts a large population of about 50 000 bp. It has been increasing in the past, but now it is strongly declining with about 5.4% annually. The decline has been estimated at 50% during the latest 10 years. In the archipelagos, the decline has been 50% as well. Currently, there are 11 000 bp in the archipelagos, *i.e.* one fifth of the total population.

In **Russia**, the tufted duck breeds with only few (60–80) pairs in the **Kaliningrad Region**, but is quite numerous in the **St Petersburg Region**. The trend is declining in Kaliningrad, but seems to be about stable in St Petersburg.

The **Estonian** population was estimated at 4,000–6,000 bp in 2003–2008, with a declining trend between 1991–2008 (Elts *et al.* 2009).

In **Latvia**, the tufted duck was increasing until the late 1980s, but has been decreasing since then. The current population amounts to 700–800 bp (A. Mednis, *pers. comm*.).

In **Poland**, the tufted duck is nowadays a widespread, but sparse breeder of the lowlands. It is more common in northern Poland, especially Pomerania. Significant populations are also found in Wielkopolska, Silesia and Małopolska. The highest densities are found on lakes and fishponds, especially near to or within Gull colonies. It is missing in the mountains; the highest known breeding place is at 500 m altitude. Since the late 19th century it has shown an increase and expansion to the south, recently also to the south-east (Tomiałojć & Stawarczyk 2003). Locally, a declining trend due to the decline of Black-headed Gull colonies has been observed (Sikora *et al.* 2007). The total Polish population was estimated to 15 000–25 000 bp during the period 1990–2000 (BirdLife International 2004).

In Germany, **Mecklenburg-Vorpommern**, the population of the tufted duck has increased during the 1970s and 1980s, but declined after 1994. It was estimated at 450 pairs in 1978–1982, 400–600 bp in 1994, but only 300–350 in 1998 (Zimmermann 2006). The main breeding areas are the coastal bird colonies, but the species is also found in inland lake areas.

The species colonised **Schleswig-Holstein** mainly during the 20th century. During 1980–1990, the numbers of breeding pairs increased from *c.* 2 600 to 3 200 (Berndt *et al.* 2002). The actual total population (including North Sea) counts *c.* 5 000 bp. The species is present in almost all suitable habitats. The highest breeding pair numbers are recorded in the inland lake areas (c. 3 300 bp), but it is also quite abundant at the Baltic coast (c. 500 bp; 2005–2009).

The **Danish** population counts about 1 000–2 000 bp and has been increasing.

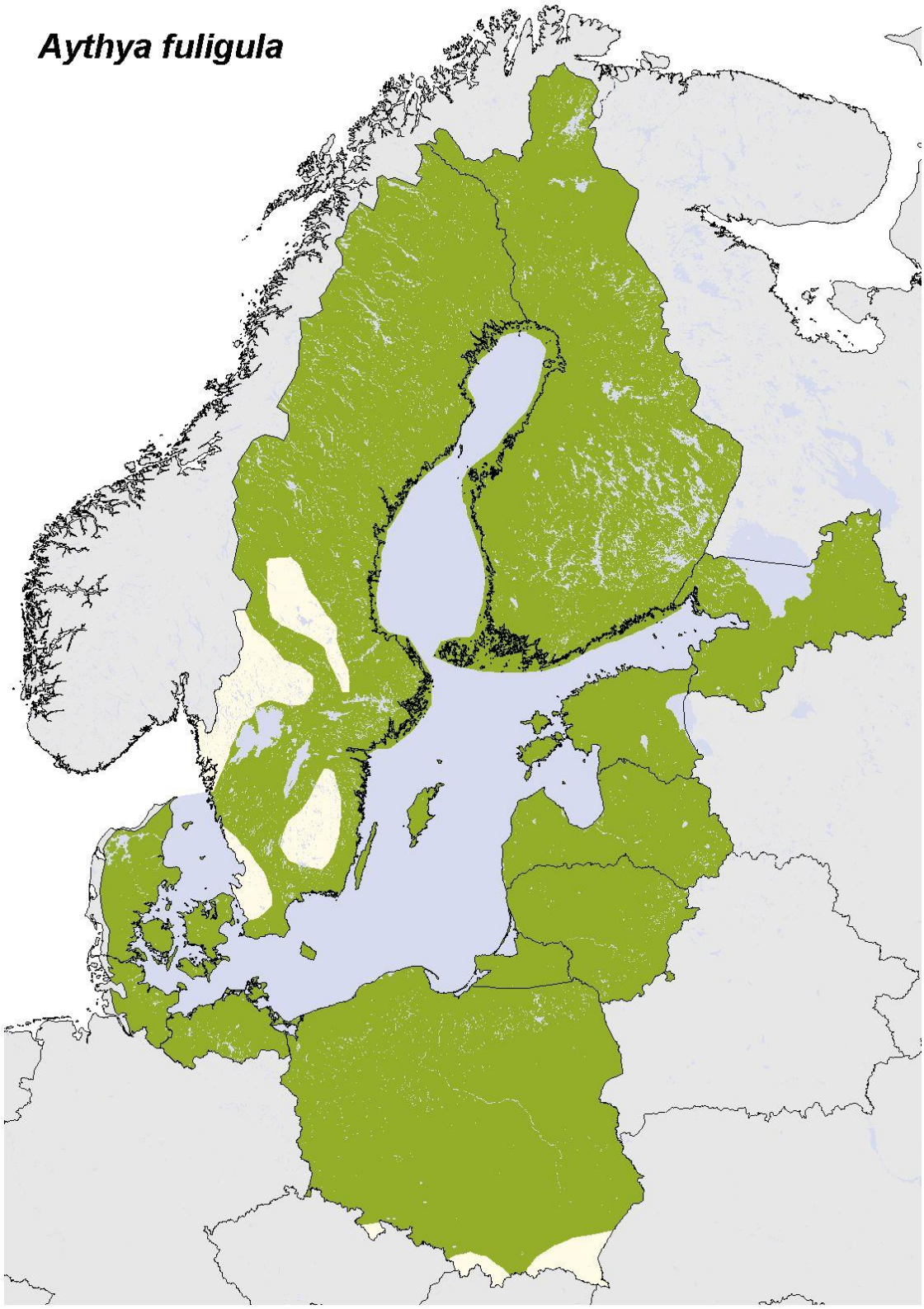
SPECIES INFORMATION SHEET *Aythya fuligula*

Table 1: Population numbers of the tufted duck in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, F=fluctuating, (+)=slightly increasing.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	73 000–94 000	2010	0	0
Finland	50 000	2009	-	+
Russia, PET	5 000–10 000	2009	0	0
Russia, KAL	60–80	2000–2004	-	F
Estonia	4 000–6 000	2003–2008	-	+
Latvia	700–800	2009	-	+
Lithuania	4 000–6 000	1999–2001	-	+
Poland	15 000–25 000	1990–2000	(+)	+
Germany, SH	3 800	2005–2009	+	+
Germany, MV	300–350	1998	-	+
Denmark	1 000–2 000	2000	(+)	+
Baltic Sea	**157 000–198 000**			

SPECIES INFORMATION SHEET *Aythya fuligula*

Distribution map



SPECIES INFORMATION SHEET *Aythya fuligula*

Habitat and ecology

The breeding habitats are marshes, lakes, fishponds and other water surfaces with rich vegetation to conceal the nest. The highest densities are found in the vicinity or within gull and tern colonies. In the vast archipelagos of the northern Baltic Sea, the association with terns and gulls is even more pronounced, especially in the outer zones (Hildén 1964). The tufted duck is only weakly marine (Numers 1995); yet, it is nevertheless the second numerous Anatidae over the entire Baltic (after the Common Eider). It feeds mainly by diving, but may also dabble. Food consists of bivalves, aquatic insects and plants.

Description of major threats

The strong decline in Finland, but also in other areas, is supposed to be related to the declining numbers of *L. ridibundus*, but also hunting, human disturbances and the increased predation by the American Mink and native predators (like foxes) have negative effects on the population. There is only little evidence for by-catch in the northern Baltic, and losses are also comparatively low in the southern Baltic (Stempniewicz 1994). However, this is an everlasting threat during severe ice winters when large bird congregations occur in restricted areas. Another potential threat are oil spills. Though the oil contamination of the Baltic has been reduced largely during the last decades, spills due to accidents are an everlasting risk.

Assessment justification

The tufted duck has been increasing and expanding its range during much of the 20th century. However, starting from the late 1980s and during the 1990s, a declining trend has been observed in many parts of the Baltic Sea area. Since the tufted duck is widespread and numerous, it is difficult to get precise population figures. The available data indicate, from a Baltic-wide view, a declining trend with a population size reduction of >15% within 15 years, which categorizes the species as *Near Threatened* (NT) according to criterion A2ab. In Finland, the estimated population decline has been even *c.* 50% within the last 10 years, both inland and in the archipelagos. However, the threshold for the category *Vulnerable* is most likely not reached for the whole Baltic.

Recommendations for actions to conserve the species

The conservation measures include the protection of breeding sites, especially from human disturbances, but also the control of predatory mammals (especially foxes, Mink and Raccoon Dog). Hunting should be banned, the species should be deleted from Annex II of the EU Birds Directive.

Common names

Denmark: Troldand, Estonia: Tuttvart, Finland: Tukkasotka, Germany: Reiherente, Latvia: Cekulainā nirpīle, Lithuania: Kuoduotoji antis, Poland: Czernica, Russia: Хохлатая чернеть, Sweden: Vigg

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SPECIES INFORMATION SHEET *Branta bernicla hrota* (wintering)

English name: **Light-bellied brent goose**	Scientific name: ***Branta bernicla hrota* (wintering population)**	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linnaeus, 1758	
Subspecies,Variations,Synonyms: Pale-bellied brent goose; *Branta hrota*	Generation length: 6.6 years	
Past and current threats (Habitats Directive article 17 codes): Extra-regional threats (XO), Overgrowth of open areas (A04.03), Climate change (M01.07), Eutrophication (H01.05), Other threat factors (Loss of specific habitat features, J03.01), Human disturbance (G01), Fishing (F02.02.05)	Future threats (Habitats Directive article 17 codes): Extra-regional threats (XO), Overgrowth of open areas (A04.03), Climate change (M01.07), Eutrophication (H01.05), Other threat factors (Loss of specific habitat features, J03.01), Human disturbance (G01), Fishing (F02.02.05), Hunting (F03.01)	
IUCN Criteria: **B1ab(iii), D2**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / VU	EU Birds Directive: Annex II B (DK, DE)	
Protection and Red List status in HELCOM countries: *Hunting not allowed in all EU Member States (Annex II B).* Denmark: – (on the 1997 Danish Amber List as a species of national responsibility outside the breeding season), Estonia: –, Finland: –, Germany: "particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/–, Latvia: –, Lithuania: –, Poland: –, Russia: 3 (Rare), Sweden: –		

Range description and general trends

The East Atlantic (Svalbard) flyway population of the brent goose, the light-bellied brent goose, breeds in the eastern and northern parts of Svalbard and in northeast Greenland. A few breeding pairs are also found on Franz Josef's Land (Clausen et al. 1999, Pihl et al. 2006). The most important wintering area of the light-bellied brent goose is in Denmark, where the species can be found on a small number of sites in north-west, north- and north-east Jutland and in the northern part of the Danish Wadden Sea. Outside Denmark, Lindisfarne in north-east England is the only other regular staging and wintering site. In severe winters, large numbers of Light-bellied brent geese migrate to the Netherlands. In autumn, 50–75% of the population stay in Denmark and the rest in Lindisfarne, but during spring migration the whole population assembles at a few spring staging sites, which all are in Denmark (Pihl et al. 2006). When shooting was stopped in the 1970s, the population started to increase. It showed a slow but steady population growth from 2 450–4 000 birds in the early 1980s to 4 000–5 000 birds in the early 1990s (Clausen et al. 1999). Since then the population further increased up to 7 600 birds in 2009 (Fox et al. 2010). During the last years, however, the population has been declining due to a combination of a series of poor breeding years in combination with a couple of cold winters and is currently estimated at 6 800 birds (P. Clausen, written).

SPECIES INFORMATION SHEET *Branta bernicla hrota* (wintering)

Light-bellied brent geese, *Branta bernicla hrota*. Pictures by Kevin K. Clausen

Distribution and status in the Baltic Sea region

The only wintering site of the light-bellied brent goose in the Baltic Sea region is in Denmark, which is the most important wintering area of the whole flyway population. The birds leave their breeding areas during September and migrate to the winter quarters, where they stay most of the time until their departure in May (Pihl et al. 2006). The Baltic wintering areas are situated along the eastern coast of Jutland (Fig. 1). In winter 2008, about 6 000 birds have been observed during midwinter counts in Demark, representing about 86% of the flyway population (Petersen et al. 2010).

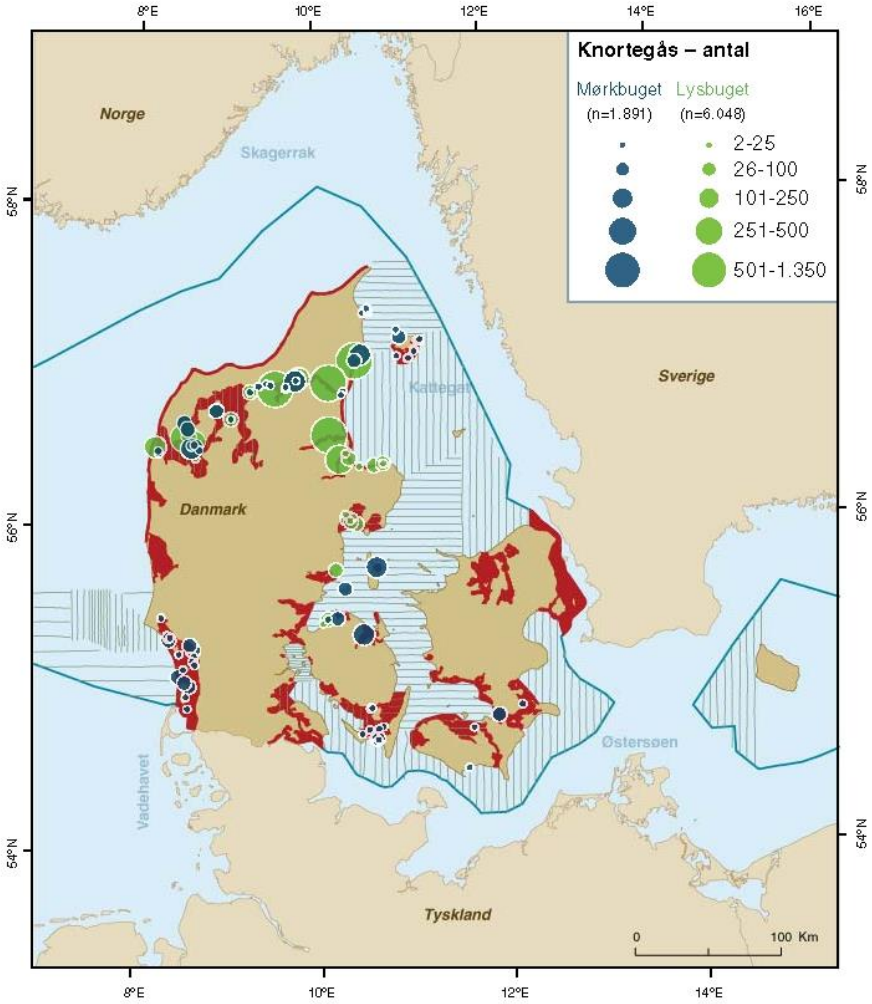

Fig. 1. Abundance and distribution of light-bellied brent goose (*Branta bernicla hrota*; green circles) in its wintering areas in Denmark observed during midwinter counts in 2008. From Petersen et al. (2010).

SPECIES INFORMATION SHEET *Branta bernicla hrota* (wintering)

Habitat and ecology

The light-bellied brent goose breeds in the high Arctic Tundra in areas with freshwater bodies close to the coast. Outside the breeding season the species is bound to low-coastal areas with dried mud flats and salt marshes suitable for feeding on e.g. eelgrass, green algae and *Salicornia*, and with roosting sites in marine coastal areas or sheltered bays. On the mud flats in the Wadden Sea and in eastern Vendsyssel (north Jutland) the birds feed particularly on a dwarf-Eelgrass species and on *Enteromorpha*. In shallow-water areas on other sites, they primarily feed on Eelgrass, Pondweed and Sea Lettuce. During the last decades, flocks of light-bellied brent geese have increasingly been observed feeding on agricultural land, e.g. on winter crops (wheat and barley) and newly sown spring barley fields (Bauer et al. 2005, Pihl et al. 2006).

Description of major threats

A high protective status has been given to all areas used by light-bellied brent geese on Svalbard and in Greenland. However, the nesting success of breeding pairs in Svalbard is greatly reduced as a result of predation by Arctic fox *Vulpes lagopus* (Madsen et al. 1992, cited in BirdLife International 2013). In the wintering areas, the light-bellied brent goose has been fully protected from shooting in Lindisfarne since 1954 and in Denmark since 1972. Most of the sites and natural habitats regularly used by the species are protected as Ramsar sites or as Special Bird Protection Areas (SPAs) under the EU Birds Directive (Clausen et al. 1999). The light-bellied brent goose is on the 1997 Danish Amber List categorized as a species of national responsibility outside the breeding season. Hunting and disturbance free reserves have been established in all the SPAs where this species occurs during the open season for other species, supporting the species' needs for undisturbed feeding areas (Pihl et al. 2006). Although many feeding habitats of light-bellied brent goose are protected in Denmark, the species is sensitive to a deterioration of feeding areas. Previously used salt marshes have been abandoned as the salt marsh vegetation became taller and eventually turned to unfavourable plant communities after changes in management practice and a subsequent lack of grazing in these areas. Sea level rises due to climate change threaten to drastically reduce salt marsh habitats important for light-bellied brent goose (Pihl et al. 2006, Clausen et al. in press). *Zostera* beds might be harmed by Blue mussel fisheries, especially in the Limfjord area. The major threat to the *Zostera* and *Ruppia* beds is, however, eutrophication and major declines in *Zostera* in different areas have been believed to be the result of eutrophication (Pihl et al. 2006). In the future, the species may be further threatened by a reduction in food supplies following the return of a disease of *Zostera marina* (see BirdLife International 2013). Besides, the species may be persecuted in its wintering areas by farmers, as conflicts have been arisen due to the increasing use of agricultural land as feeding areas by light-bellied brent geese. Furthermore, the light-bellied brent goose is sensitive to severe winter conditions in combination with depletion or low availability of food resources, and high losses during cold winters have been documented for juvenile birds as well as for adults (Clausen et al. 1998, Clausen et al. 2001).

Assessment justification

As 80–90% of the total biogeographic population winter in DK, the trend of the total flyway population is supposed to be representative of the Danish (=Baltic) winter population. The Svalbard flyway population showed a steady increase in numbers since the 1970, comprising 2 450–4 000 birds in the early 1980, 4 000–5 000 birds in the early 1990s and 7 600 birds in 2009 (Clausen et al. 1999, Fox et al. 2010). Since then the population further increased up to 7 600 birds in 2009 (Fox et al. 2010). Although the population has recently been declining to 6 800 birds in October 2012 (P. Clausen, written), the population trend over three generations (20 years, according to the Swedish Red List, Tjernberg & Svensson 2007), is affected by the increase of the population since the 1970s, when shooting was stopped. Thus, the species does not qualify for a Red List category under criteria A and C. However, the population of light-bellied brent goose wintering in Denmark is small and restricted. The extent of occurrence is probably < 40 000 km², combined with a low number of known locations and a decline of habitat quality (P. Clausen, written). There are also large fluctuations in the number of individuals, e.g. due to winter conditions (see Petersen et al. 2006, 2010). The species is categorized as Near Threatened

(NT) according to criterion B1ab(iii). Furthermore, the number of locations in the Baltic Sea area during winter is < 10 (P. Clausen, written; Petersen et al. 2010), thus also classifying the species as Near Threatened under criterion D2.

Recommendations for actions to conserve the species

Despite the population increase over the last 30 years, the light-bellied brent goose is still one of the smallest goose populations in the world and it is still too early to consider the population secured. The national conservation status in in Denmark is assessed as unfavourable-increasing (Pihl et al. 2006). A new assessment of the status of the light-bellied brent goose in Denmark is currently under preparation, but the score of the species will not change (P. Clausen, written). The main breeding areas should be monitored regularly, especially to follow future trends in predation and competition for breeding sites between light-bellied brent geese and the growing barnacle goose population (see Clausen et al. 1999). Site management plans based on careful ecological research should be a priority in the future, especially against the background of climate-change induced effects on feeding habitats (see Clausen et al. in press). The marking/re-sighting program should be continued, aimed at improving the understanding of mortality rates of different age classes in the population, and to provide data for a more thorough analysis of the viability of this small population (Clausen et al. 1999). Feeding areas need to be further protected, e.g. against eutrophication, damage by fisheries or overgrowing due to reduced cattle grazing. As it is known that human disturbances can have negative effects on the energy budget of light-bellied brent geese (Clausen et al. 1999), undisturbed feeding and roosting sites need to be safeguarded.

Common names

Denmark: lysbuget knortegås, Estonia: lääne-mustlagle, Finland: sepelhanhi, Germany: Hellbäuchige Ringelgans, Latvia: melngalvas zoss ?, Lithuania: paprastoji berniklė, Poland: bernikla jasnobrzucha, Russia: Атлантическая черная казарка, Sweden: ljusbukig prutgås

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SPECIES INFORMATION SHEET *Calidris temminckii*

English name: **Temminck's stint**	Scientific name: ***Calidris temminckii***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Leisler, 1812	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Alien species (predation; I01), Competition and predation (I02), Tourism (G01), Other threat factors (J03, J03.02.03), Unknown (U)	Future threats (Habitats Directive article 17 codes): Alien species (predation; I01), Competition and predation (I02), Tourism (G01), Other threat factors (J03, J03.02.03), Unknown (U)	
IUCN Criteria: **A2a-c**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive -no Annex II EU Birds Directive- no	
Red List status in HELCOM countries: Denmark: –, Estonia: NA, Finland: VU, Germany: –, Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: LC		

Range description and general trends

The temminck mainly breeds in Fennoscandia and Arctic Russia. The European breeding population is probably very large (85 000–420 000 bp). Russia and Norway are hosting the largest numbers of breeding pairs, followed by Sweden and Finland. In Estonia, the species is an occasional breeder, and a few breeding pairs are also found in Scotland (BirdLife International 2004).

Calidris temminckii. Photo by Christopher Plummer.

Distribution and status in the Baltic Sea region

In Fennoscandia, the core breeding area is in Lapland and the Scandes, but there is also a small population along the coast of the Bothnian Bay, both on the Swedish and Finnish side. The **Swedish** Bothnian Bay population counts currently *c*. 60 bp; the trend of the Swedish inland population is unknown.

SPECIES INFORMATION SHEET *Calidris temminckii*

The **Finnish** Bothnian Bay population declined from 500 bp in the 1970s to 170–200 pairs in the late 1980s (Rönkä 1996), and subsequently to currently 100 bp. The Finnish Lapland population has been declining, possibly by 50% during the period 1990–2000. Currently, the breeding range of the Finnish Lappish population has retreated to the uppermost north, this probably resulting in lower recruitment from this core area to the peripheral Bothnian Bay population. DNA studies indicate a gene flow between these two subpopulations (Rönkä 2004).

In **Estonia**, the temminck is only a sporadic breeder (Elts *et al*. 2009).

Table 1: Population numbers of Temminck's stint in the Baltic Sea area. For population trends 0=stable, -=decreasing, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	5 400–9 600	2010	0	-
Finland	1 000–2 000	2006–2009	-	?
Estonia	Sporadic breeder	2003–2008		
Baltic Sea	**6 400–11 600**			

SPECIES INFORMATION SHEET *Calidris temminckii*

Distribution map

SPECIES INFORMATION SHEET *Calidris temminckii*

Habitat and ecology

The Bothnian Bay breeding areas are characterized by flat, low-leveled coastal plains and islands covered by wave-washed moraine. Natural habitats consist of sandy and gravelly meadows and heaths with sparse and low vegetation and extensive dunes (Rönkä 1996). Man-made habitats include industrial landfills and harbour yards, also sparsely vegetated fields around fishing huts and summer cottages. Loose colonies can be formed, but the numbers are currently low. In a sample of 48 nest sites, only three sites were occupied by more than five pairs, most had 1–4 pairs and the largest one had 20 pairs (Rönkä 1996). New potential sites are formed permanently by land uplift, while established sites become unsuitable due to rapid succession of the vegetation. Rapid colonization and disappearance is typical for the species. There is no tide in the Bothnian Bay, but abruptly rising sea water (up to 200 cm) regularly destroys nests. Flooding losses are accelerated by the narrowing of shorelines due to the termination of grazing. Overgrowth also hampers anti-predator behaviour of nesting adults, with the result of increasing nest predation (Koivula & Rönkä 1998).

Description of major threats

Nothing is known about the reasons for the decline of the northern Lappish population. The basic reason for the population low in the Bothnian Bay is nest predation leading to lesser recruitment and to a higher rate of site shifting by those birds which face nest losses. The gene flow from Lapland into the Bothnian Bay population is currently low, compared to the observed immigration. This is due to immigrants becoming emigrants as soon as they fail in breeding, while the locals tend to remain philopatric regardless of the breeding result (Pakanen *et al.* 2010). This emphasizes the need for measures to protect nests from predation and to restore habitats to attract protective species like Terns and larger waders to set among the Temminck's stints. Already in the 1960s, the hatching result was found to decrease from the "natural" 58% to 33% due to increasing predation rates (Hildén 1978). In experimental studies, fenced nests deterred avian predators effectively, such as common Gulls, resulting in a hatching rate of 3–4 chicks, whereas they cannot resist mammalian predators such as Raccoon Dogs, which can devastate the entire local population within one season (Rönkä 2004).

Assessment justification

The population of the Finnish breeding areas has suffered strong declines in recent times, whereas there are no strong indications for a decrease in Sweden. The total population of the Baltic Sea countries classifies probably as *Near Threatened* (NT) according to criterion A2a-c.

However, considering the Bothnian Bay population separately, the species meets the criteria for *Vulnerable* (VU) according to A2ac and D.

Recommendations for actions to conserve the species

In the Bothnian Bay, deterring predators by erecting fences around nests with eggs has been among the few activities carried out so far. Large-scale campaigns to remove predatory mammals should also be carried out. Restoring breeding habitat by re-introducing grazing would shift the breeding territories farther away from the flood zone to upper land. Awareness among authorities when planning and implementing the use of sandy shores is needed. All these activities would benefit the local recruitment. However, to prevent inbreeding, recruitment from outside should be safeguarded as well.

Common names

Denmark: Temmincksryle, Estonia: Värbrisla, Finland: lapinsirri, Germany: Temminckstrandläufer, Latvia: Temminka šņibītis, Lithuania: Teminko begikas, Poland: biegus mały, Russia: Белохвостый песочник, Sweden: Mosnäppa

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SPECIES INFORMATION SHEET *Charadrius hiaticula hiaticula*

English name: **Ringed plover**	Scientific name: ***Charadrius hiaticula hiaticula***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Charadriidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03, K02), Tourism (G01), Alien species (I01), Competition and predation (I02), Changes in agricultural management (A02)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03, K02), Tourism (G01), Alien species (I01), Competition and predation (I02), Changes in agricultural management (A02)	
IUCN Criteria: **A2bc**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC Assessment on species level, not for the sub-species *Ch. h. hiaticula*	Annex I EU Birds Directive -no Annex II EU Birds Directive -no	
Red List status in HELCOM countries: Denmark: LC (species level), Estonia: NT (species level), Finland: NT (species level), Germany: 1 (Critically endangered, species level), Latvia: –, Lithuania: R Rare (species level), Poland: VU, Russia: –, Sweden: LC		

Range description and general trends

The ringed plover is a widespread breeder in northern Europe. The European breeding population counts >120 000 bp. It was stable during the period 1970–1990, but in some countries the population was declining during the period 1990–2000 (BirdLife International 2004). In the Baltic Sea area, the ringed plover occurs with two subspecies: *Ch. hiaticula hiaticula,* which breeds mainly along the coasts all around the Baltic (but also along larger, unregulated rivers), and *Ch. hiaticula tundrae,* which breeds in the Swedish mountain and Finnish inland (north-east Finland and Lapland) areas.

Charadrius hiaticula hiaticula. Photo by Jürgen Reich.

SPECIES INFORMATION SHEET *Charadrius hiaticula hiaticula*

Distribution and status in the Baltic Sea region

Sweden hosts by far the largest population of the ringed plover in the Baltic Sea area. The total is estimated at 15 000 bp. The larger proportion (*c.* 12 100 bp) breeds in the mountains and belongs to the subspecies *Ch. hiaticula tundrae*, which is not included in this assessment. The subspecies *Ch. hiaticula hiaticula* breeds along the entire coast from the Finnish border to northern Halland; it is estimated at 3 200 pairs. According to Ottvall *et al.* (2009) the population has been stable during the last 10- and 30-year periods. However, this assessment does not distinguish between the two subspecies.

In **Finland**, the recent data indicate a decline of 47% during 10 years, but these data are regarded as uncertain and biased. The current decline appears to concern only the inland populations of north-east Finland and Lapland, which belong to the subspecies *Ch. h. tundrae*. The coastal population of *Ch. h. hiaticula* is estimated at *c.* 1 100 bp in 2010 and considered as stable (Hario & Rintala 2011). In **Estonia**, a strongly negative trend has been observed during 1991–2008, the population declined by more than 50% (Elts *et al.* 2009).

Lithuania, Latvia and Baltic **Russia** only host small numbers of ringed plovers. The breeding sites are usually coastal; however, inland breeding occasionally may occur (Vysotsky & Kondratiev 1999). The recent trend seems to be about stable.

In **Poland**, the ringed plover is a scarce breeder (350–400 bp), mostly along the coast and large to medium-sized rivers, where currently *c.* 80% of the population are found. During the last 20 years, a marked decline in both coastal and inland breeding areas has been observed (Sikora *et al.* 2007). At the coast, breeding pair numbers declined from 160–200 bp during the 1970s to 60–70 bp in the 1990s. The strongest population is found in the middle section of Vistula River, but the species also breeds along the Bug, Pilica and Narew rivers (Tomiałojć & Stawarczyk 2003).

In **Germany**, **Mecklenburg-Western Pomerania**, the ringed plover is a scattered, but widespread breeder on beaches, sand banks, coastal spits, dump sites for dredging material and near-coastal and inland crop land (maize, summer grain, beets and potatoes; Holz & Herrmann 1982, Holz 1987), which makes it difficult to get reliable population figures. However, it seems that outside coastal bird sanctuaries with strict control of predatory mammals the ringed plover has declined largely, especially during the 1990s. The country-wide bird inventories indicate a decline of 50% between 1978–82 and 1994–1998 (Nehls 2006). The trend after 2000 is only known for the bird sanctuaries, where the population has been about stable. In **Schleswig-Holstein**, the ringed plover breeds with about 640 bp; 220 of them are breeding at the Baltic coast. The Baltic breeding population has been about stable since the mid-1980s.

Based on Wadden Sea counts (*e.g.*, Thorup 2007) and the project Fuglenes Danmark (Grell 1998), an estimate of the **Danish** total population was prepared for the WSG project Breeding waders in Europe 2000 by Thorup (2006). For 1993–1997, a total of 1 900–2 500 bp have been estimated for Denmark, 850–1 600 bp of them breeding in the Baltic region.

There are not many population data available for trend estimates at the Danish Baltic coast. At Læsø, there was a 28% increase from 90 pairs in 1973 (Møller 1975) to 115 pairs in 1996 (P.A.F. Rasmussen 1996, unpubl.). On Saltholm, the breeding number dropped from 35 pairs in 1976 (Jensen 1987) to 10 pairs in 2006 (M. Jørgensen 2007 unpubl.), and on the 32 coastal meadows most important for breeding meadowbirds in the former Storstrøms Amt, the number of breeding ringed plovers dropped by 50% – from 82 pairs to 41 pairs – between the late 1980s and 2003 (Jørgensen 1989, 2006).

The general trend in Denmark is obviously strongly declining. In the Danish Wadden Sea, census programmes covering the whole area showed a decline of 52% from 1996–1997 to 2006–2007, from 279 to 135 pairs (Thorup 2007). If a 50% decline is assumed for the last 15–20 years for all areas – and

the relatively poor data could support this – the Danish total may be as low as approximately 1000 pairs in 2010, with perhaps 500–650 pairs in the Baltic region.

Table 1: Population numbers of the ringed plover in the Baltic Sea area. For population trends 0=stable, -=decreasing, --=strongly decreasing, f=fluctuating, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	3 200	2010	0	0
Finland	1 100	2009	0	-
Russia KAL	7–12	2003–2009	f	-
Russia PET	10–20	2009	?	?
Estonia	1 000–2 000	2003–2008	--	-
Latvia	20–30	2009	-	0/-
Lithuania	30–50	1999–2001	0	0
Poland	350–400	2003	-	-
Germany SH	220	2005–2009	0	-
Germany MV	220–240	1994–1998	-	-
Denmark	500–650	2010	-	-
Baltic Sea	**6 650–7 900**			

SPECIES INFORMATION SHEET *Charadrius hiaticula hiaticula*

Distribution map

SPECIES INFORMATION SHEET *Charadrius hiaticula hiaticula*

Habitat and ecology

The ringed plover inhabits open, bare or sparsely vegetated habitats of early stages of succession (coastal islets, sandy spits and ridges, beaches, river banks) or with a transitional character, especially man-made gravel-pits, reclaimed land, roadsides and pastures. It also breeds on agricultural land, as long as the vegetation is low (summer grains, potatoes, maize, beets, Holz 1987).

In Denmark, the species uses three different breeding habitats: 1) sandy beaches, 2) spring sown fields in cultivated land, and 3) short grazed coastal meadows. In 1993–1997 the numbers of breeding pairs in these habitats were estimated at: Sandy beaches: 450–950 pairs; cultivated fields: 140–220 pairs; coastal meadows (including mixed meadow-coastal lagoon-sandy beach habitats): 1 100–1 500 pairs.

Description of major threats

Overgrowth of open habitats, human disturbance by increased numbers of visitors on the coast, increased predation, and construction projects destroying suitable habitats are probably among the main reasons for the declines. With regard to the fraction of the population that breeds on cultivated land, also changes in agricultural practices are obviously important, especially a large-scale shift from spring-sown to autumn-sown crops. Better drainage and fewer left-over small wet patches in the fields probably also have a negative impact on breeding site availability.

In the coastal environment, the breeding success is low in many areas, due to disturbances and high predation rates. Predation plays a major role in Germany, where the Fox population has increased considerably due to rabies eradication during the 1990s.

Assessment justification

Since the ringed plover is a scattered breeding bird, it is difficult to obtain precise population numbers. However, a considerable decline during the past decades is obvious for many parts of the Baltic region. Though the decline seems to have slowed down or stopped in several countries (*e.g.,* Germany, Poland) it is continuing in other countries with strong populations (Estonia, Denmark). However, the trends are not uniform. In the Stockholm Archipelago the species has increased by 25% from 1975 to 2000. Also in Finland, the population in the archipelago (totalling now 1100 pairs) has been increasing by 1.9% per year since the late-1980s.

The general figures indicate that the ringed plover qualifies for the category *Near Threatened* (NT) according to criterion A2bc.

Recommendations for actions to conserve the species

Predator control is by far the most readily used measure to enhance the reproduction rate in the Baltic breeding habitats; the main predators are foxes and minks. The ringed plover is well adapted to breed on barren rocks – a habitat not in short supply. However, breeding success on low laying sandy islets and beaches is jeopardized by the increasing construction and tourism activities in these habitats. Public awareness campaigns are needed in areas that have been taken over by man. Re-introducing grazing is an important tool against the overgrowth of coastal meadows. A set-a-side practice of small wet patches in the field should be launched in cultivated habitats.

Common names

Denmark: Stor præstekrave, Estonia: Liivatüll, Finland: tylli, Germany: Sandregenpfeifer, Latvia: Smilšu tārtiņš, Lithuania: Jurinis kirlikas, Jūrinis kirlikas, Poland: sieweczka obrozna, Russia: Галстучник, Sweden: Större strandpipare

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SPECIES INFORMATION SHEET *Hydrocoloeus minutus* (wintering)

English name: **Little gull**	Scientific name: ***Hydrocoloeus minutus* (wintering population)**	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae	Species authority: Pallas 1776	
Subspecies,Variations,Synonyms: *Larus minutus*	Generation length: 5.3 years	
Past and current threats (Habitats Directive article 17 codes): Breeding: Alien species (I01), Competition and predation (I02), Climate change (M01.03), Human disturbance (G01), Other threat factors (Loss of specific habitat features, J03.01), Contaminant pollution (H01) Wintering: Oil spills (H03.01)	Future threats (Habitats Directive article 17 codes): Breeding: Alien species (I01), Competition and predation (I02), Climate change (M01.03), Human disturbance (G01), Other threat factors (Loss of specific habitat features, J03.01), Contaminant pollution (H01) Wintering: Oil spills (H03.01)	
IUCN Criteria: **D2**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	EU Birds Directive: Annex I	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: RE, Estonia: VU, Finland: LC, Germany:"particularly protected" under Federal Species Protection Decree (Bundesartenschutzverordnung)/ R (Extremely rare), Latvia: –, Lithuania: 3 (R, Rare), Poland: –, Russia: –, Sweden: LC (breeding)		

Range description and general trends

Hydrocoloeus minutus Photo by Nicole Sonntag

Little gulls have a patchy distribution in Central and Northern Eurasia. Besides, a small population occours at Hudson Bay and at the Great Lakes in North America. In Europe, breeding is concentrated in northern Scandinavia, the Baltic States, Belarus Russia and Ukraine. Occasionally, breeding birds are found far away from their usual range, e.g. in Britain, the Netherlands and Germany. The wintering grounds extend from W Europe to the Baltic Sea and from the Mediterranean to the Black Sea and the Caspian Sea. Birds breeding in Europe overwinter in the North and Baltic Seas, as well as in the Atlantic off W Europe and NW Africa (Mendel et al. 2008, BirdLife International 2013). The European breeding population of little gulls underwent a moderate decline between 1970 and 1990. The decreasing trend reversed during the following decade, showing stable, fluctuating or increasing trends across the vast majority of its European breeding range. The population has, however, apparently not yet recovered to former levels (BirdLife International 2004). In Finland, the population trend is currently increasing and the distribution trend expanding (Valkama et al. 2011). For Sweden, a strongly increasing long-term trend (30 years) and an increasing short-term trend (10 years) has been reported (Ottvall et al. 2009). In contrast, the breeding population in Estonia strongly decreased in the period 1991–2008 (Elts et al. 2009). According to BirdLife International (2004) the breeding population is increasing in Sweden and Norway, stable in Belarus and fluctuating in Lithuania and Russia, resulting in a moderate increasing trend of the overall European breeding population. The European / W Mediterranean breeding population was estimated at 72 000 to

147 000 birds for the period 1990–2000, with increasing population trend (Wetlands International 2013).

Distribution and status in the Baltic Sea region

The main wintering areas of little gulls in the Baltic Sea are located in the Gulf of Riga, the Irbe Strait area, in the south-western part of the Baltic proper and in Danish waters (Fig. 1). Large numbers of birds arrive at the coasts of Latvia and Poland in late July and August to moult (Durinck et al. 1994). In August and September, high numbers of foraging little gulls concentrate in German waters along the coast of Usedom and in the Greifswald Lagoon (Schirmeister 2001, 2002, Mendel et al. 2008). Eventually, the majority of little gulls migrate overland across Western Europe to the Atlantic, while some birds remain in the Baltic Sea, especially in mild winters. When the Gulf of Riga freezes up, little gulls either concentrate in the Irbe Strait or move south to the central parts of the Baltic proper and to Danish waters. In severe winters, little gulls seem to leave the Baltic Sea area. In 1988–1993, the Baltic Sea winter population was estimated at 2 245 birds (Durinck et al. 1994). Spring movements from the main wintering areas take place in April and May. Most gulls migrate overland, but some birds are also observed along the coast of the Baltic Sea (Durinck et al. 1994).

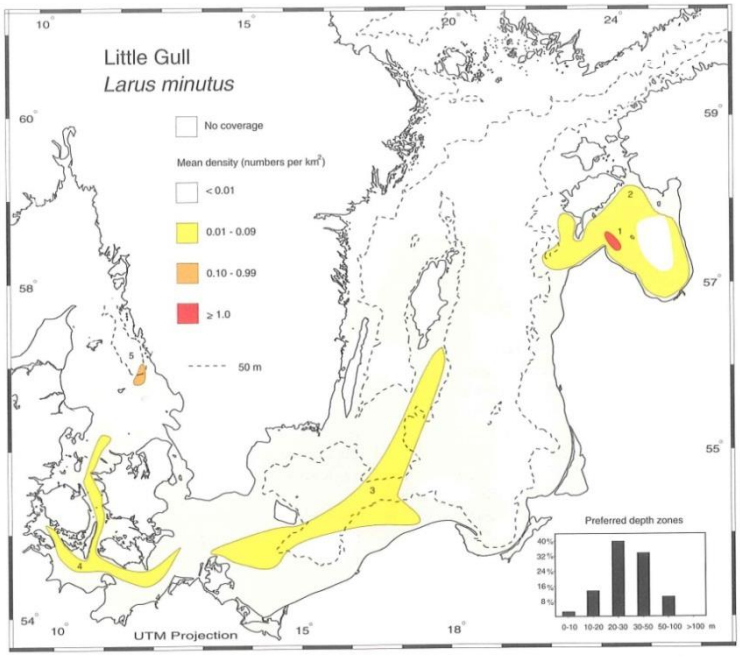

Fig. 1. Distribution and density of wintering little gulls (*Hydrocoloeus minutus*) in the Baltic Sea, 1988–1993. The histogram shows the proportion of birds recorded in different depth zones during the surveys. From Durinck et al. (1994).

Habitat and Ecology

Little gulls breed on floating water plants on the shores of islands, often fringed by reeds, and on other secluded locations on the edge of freshwater lakes, marshes, river basins and fish ponds, showing a preference for eutrophic waters with lush vegetation and emergent or floating plants. Along the eastern Baltic Sea coast, the species also nests in brackish water areas. Little gulls often breed together with terns or in small colonies of black-headed gulls. In winter, the birds occur in river mouths, along the coast and at sea, foraging in shelf areas rich in plankton and small fish or at steam or sewage outlets. They usually winter in small groups, but sometimes they form very large flocks of many thousand individuals. In the Baltic Sea, little gulls mainly occur in offshore areas of 10 to 100 metres water depth (see **Fig. 1**). During migration the species is also found on large inland lakes or rivers (Durinck et al. 1994, Mendel et al. 2008, BirdLife International 2013). When breeding and in inland staging / wintering grounds, the diet mainly consists of aquatic insects and small fish. Little is known, however, about the

diet of migrating or wintering birds at sea. In the North Sea, little gulls probably feed on zooplankton like fish larvae, fish spawn and copepods as well as on floating insects (Schwemmer & Garthe 2006). During migration through the Baltic Sea, the species is often associated with frontal systems and floating seaweed, probably feeding on small crustaceans, floating insects and small fish (Sonntag unpubl. data).

Description of major threats

In the breeding areas in Central Europe, the species is vulnerable to **environmental pollution** and to **threats to aquatic water bodies**, entailed by natural causes (e.g. **flooding**) or **habitat alteration / destruction** and **disturbance** due to **human activities**. Besides, locally high losses can be caused by **predation** (Bauer et al. 2005). In the wintering areas in the Baltic Sea, little gulls are threatened by **oil pollution**, as they sometimes form large flocks of swimming birds. Besides, they might be adversely affected by a **reduction of small fish stocks** as an indirect effect of fishing activities. However, the species is assumed to benefit from the increasing availability of small fish and other prey items due to eutrophication and overfishing of large predatory fish (see Mendel et al. 2008).

Assessment justification

According to Durinck et al. (1994), about 2 245 little gulls occurred in the Baltic Sea during the winter periods 1988–1993. More recent information on the winter population is, however, lacking as no winter surveys for gulls are undertaken in most Baltic Sea countries. The European breeding population of little gulls underwent a moderate decline between 1970 and 1990. The trend reversed during the following decade. Although the population has apparently not recovered to former levels, the overall European breeding population shows a moderate increasing trend (see above). The overall European winter population is fluctuating, with stable or probably stable trends in Finland, Estonia and Latvia and probably increasing trends in Poland (BirdLife International 2004). The flyway population breeding in Europe / Russia is considered increasing by Wetlands International (2013). Based on predominantly stable or increasing trends of the breeding and wintering population in several Baltic Sea countries during the last two decades, the Baltic Sea winter population is assumed not to reach the level for a Red List category under criteria A and C. The species has a large range and hence does not meet the criteria for a Red List assessment under criterion B (see **Fig. 1**). However, although gulls are usually widespread during winter, the distribution of little gulls in the Baltic Sea seems to be concentrated to less than ten locations. According to Durinck et al. (1994), more than 95% of the Baltic winter population were concentrated in five areas, three of which are quite restricted. Thus, there might be an imaginable threat that can make the species capable of becoming *Vulnerable* or *Endangered* within a very short time (e.g. oiling). Accordingly, the species is classified as *Near Threatened* according to criterion D2.

Recommendations for actions to conserve the species

Management measures to reduce or prevent overgrowing and flooding of breeding habitats, reduction of contamination with environmental pollutants, reduction of disturbances near the nesting sites and predator control are some options to improve the breeding success of little gulls. In the Baltic wintering areas, the prevention of accidental and chronic oil pollution will benefit the species.

Common names

Denmark: dværgmåge, Estonia: väikekajakas, Finland: pikkulokki, Germany: Zwergmöwe, Latvia: mazais ķīris, Lithuania: joudagalvis kiras, mažasis kiras, Poland: mewa mala, Russia: Малая чайка, Sweden: dvärgmås

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SPECIES INFORMATION SHEET *Limosa limosa*

English name: **Black-tailed godwit**	Scientific name: ***Limosa limosa***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03), Construction (reclamation of land; J02.01), Competition and predation (I02), Alien species (I01), Extra-regional threat (hunting; XE)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03), Competition and predation (I02), Alien species (I01), Extra-regional threat (hunting; XE)	
IUCN Criteria: **A2ac**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category NT / VU (A2b)	Annex I EU Birds Directive -no Annex II EU Birds Directive -II B (DK, FR)	
Red List status in HELCOM countries: Denmark: VU, Estonia: NT, Finland: EN, Germany: 1 (Critically endangered), Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: –, Russia: –, Sweden: CR		

Range description and general trends

The black-tailed godwit is a widespread, but patchily distributed breeder in whole Europe. Most of the European breeding population belongs to the nominate race *L. limosa limosa.* The northern populations in Norway, Iceland and Scotland are of the form *islandica.* The key populations of the nominate form are found in the Wadden Sea (Netherlands, Germany), Russia, Belarus and Poland. The entire European population counts >99 000 bp; the population in the Baltic Sea area represents <10% of the European total.

The nominate black-tailed godwit has undergone a considerable decline across much of its European range, and this trend is also true for most parts of the Baltic Sea area. However, in the northern parts of the Baltic range (Finland, Russia/PET) it seems to be slowly increasing.

Limosa limosa. Photos by Andrei Frenkel (left) and Karauda Lech (right).

SPECIES INFORMATION SHEET *Limosa limosa*

Distribution and status in the Baltic Sea region

In **Sweden**, the black-tailed godwit breeds only in the southern parts of the country, namely on Gotland, Öland and in Scania, but also on the west coast (Halland). First breedings were recorded in 1835 on Gotland and in 1856 on Öland. On these islands, the species gained a stronghold for a short period at the end of the 19th century, being seemingly abundant at that time. However, short time later a rapid decline took place and at the beginning of the 1900s only a few pairs had remained on Öland. Gotland was reoccupied in 1933 and the species started to expand. The Swedish breeding population was still low in the 1960s (150–175 bp), but then increased to 350–375 bp in 1980 and was about 350 bp during the 1990s (50 bp on Gotland, 50–60 in Scania, 240 on Öland). Since then, it has decreased rapidly to 250 bp in 2000 and to less than 100 bp at present.

In Finland, the species is rare, but slowly increasing. The main breeding sites are found in the Oulu area; some sites are scattered over southern Finland. The species does not breed in northern Finland. In Russia/PET the population is characterised by considerable fluctuations, however, the short term trend seems to be increasing. During the breeding season, the species may be found all over the region, but there are only few places with confirmed breeding records.

Poland hosts by far the largest breeding population of the black-tailed godwit in the Baltic Sea area. The species is a widespread breeder in the lowland with a highly patchy distribution. Important breeding areas are mainly found in the central and eastern provinces; the species is scarce in other regions. The largest breeding populations are found in Tyśmienica valley (630–670 bp), the Biebrza Marshes (600 bp), and the Bug valley (490–560 bp; Sikora *et al.* 2007). There is a slight expansion towards the south (Tomiałojć & Stawarczyk 2003). During the last 20 years, the population has strongly declined. In western Poland, surveys during the periods 1980–1990 and 2000–2010 revealed a decrease of 84.6% (Ławicki *et al.* 2011)! Previous estimates of 6 500–7 000 bp for the entire Polish breeding population are probably too high, the number of 5 000–6 000 bp seems to be more realistic (Sikora *et al.* 2007; Wilk *et al.* 2010).

At the **German** Baltic coast the breeding population of the black-tailed godwit currently counts about 60 bp in Mecklenburg-Western-Pomerania and only 2 bp in Schleswig-Holstein. The long-term population development has been characterised by strong fluctuations, which are well documented for Mecklenburg-Western Pomerania (Prill 1972). There are only few reported breeding records for this region from the 19th century; the species obviously was not a regular breeder at that time. The population increased rapidly at the beginning of the 20th century to >100 bp around 1910, but then declined again to a few breeding pairs during the 1940s. The development starting at the end of the 1950s until 2011 is shown in Figure 1.

SPECIES INFORMATION SHEET *Limosa limosa*

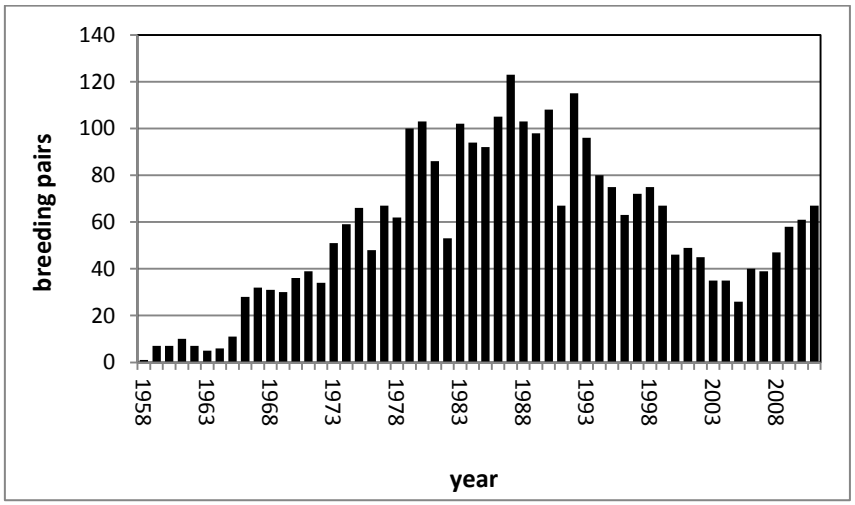

Figure 1: Long-term development of the breeding population of the black-tailed godwit in Mecklenburg-Western Pomerania, illustrating considerable fluctuations.

The Baltic Danish population of black-tailed godwit has never been very large (Clausen 2011, Thorup 2004 and unpublished):

Table 1: The population development of the black-tailed godwit in Denmark.

	1970 (1964–1972)	**1980 (1977–1982)**	**2009/10 (2006–2010)**
Baltic	135	198	150
North Sea	512	727	393
Denmark total	647	925	543

A few sites lost their black-tailed godwits during pump-drainage projects. Improved management with extensive hay making on the island of Saltholm was followed by a marked increase of the population. Also at Borreby Mose an improved management resulted in more breeding black-tailed godwits.

Table 2: Population numbers of the black-tailed godwit in the Baltic Sea area. For population trends -=decreasing, +=increasing, F=fluctuating, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	50–100	2010	-	F
Finland	70–90	2009	+	+
Russia, PET	100–200	2009	+ (F)	+ (F)
Russia, KAL	15–20	2003–2009	-	-
Estonia	500–700	2003–2008	-	-
Latvia	80–100	1990–2000	?	-
Lithuania	300–450	1999–2001	-	-
Poland	5 000–6 000	1990–2004	-	-
Germany - SH	2	2010	-	-
Germany - MV	67	2011	+	F
Denmark	150	2009–2010	0	-
Baltic Sea	**6 330–7 870**			

SPECIES INFORMATION SHEET *Limosa limosa*

Distribution map

SPECIES INFORMATION SHEET *Limosa limosa*

Habitat and ecology

The original breeding habitats are river valley fens, floods at the edges of large lakes, raised bogs and moorlands. The majority of the European population now uses habitats such as wet grasslands, coastal salt marshes, pastures, or wet areas near fishponds. Cropland may also be used for breeding (Tucker & Heath 1995).

Description of major threats

In Poland, which hosts by far the largest proportion of the Baltic breeding population, drainage, land reclamation, river regulation and low breeding success due to high predation pressure by Red Foxes and corvids are seen as the main factors for the decline of the species (Ławicki *et al.* 2011).

Habitat changes and increased predation by predatory mammals, especially Foxes, are the reasons for the abandonment of breeding sites in Germany. However, management of predatory mammals on coastal islands resulted in an increase of breeding pair numbers in recent times. The black-tailed godwit is hunted in France, with a total bag of 6 000–8 000 birds. Though hunting is not the main factor for the decline, it probably puts an additional pressure on a population which is already weakened by other factors (EU Commission 2007b).

Assessment justification

The observed decline over 3 generations (18 years) exceeds, for the whole Baltic, >15%, but does not reach 30%. The species meets the criteria A2a and probably also A2c under *Near Threatened* (NT).

Recommendations for actions to conserve the species

The main measures to conserve the species are a grazing and water management at the breeding existing sites directed to the habitat requirements of the species. Habitat restoration (restoration of the natural flood regime of coastal and riverine polders; establishment of appropriate grazing regimes) of former or potential breeding sites is also recommended. Control of predatory mammals is essential for many breeding sites. Though hunting is probably not the main factor for the decline, it poses an additional pressure and should be banned. The species should be deleted from Annex II of the EU Birds Directive.

Common names

Denmark: Stor Kobbersneppe, Estonia: Mustsaba-vigle, Finland: mustapyrstökuiri, Germany: Uferschnepfe, Latvia: Melnā puskuitala, Lithuania: Griciukas, Poland: rycyk, Russia: Большой веретенник, Sweden**:** Rödspov

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SPECIES INFORMATION SHEET *Oenanthe oenanthe*

English name: **Northern wheatear**	Scientific name: ***Oenanthe oenanthe***	
Taxonomical group: Class: Aves Order: Passeriformes Family: Muscicapidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: <3.3 years	
Past and current threats (Habitats Directive article 17 codes): Changes in agricultural management (A02), Extra-regional threats (XE)	Future threats (Habitats Directive article 17 codes): Changes in agricultural management (A02), Extra-regional threats (XE)	
IUCN Criteria: **A2abc**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive -no Annex II EU Birds Directive-no	
Red List status in HELCOM countries: Denmark: LC, Estonia: LC, Finland: VU, Germany: 1 (Critically endangered), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: LC		

Range description and general trends

The northern wheatear is a widespread breeding bird in most of Europe. Its European population is large (>4.6 Mio bp), and was stable between 1979 and 1990. During the period 1990–2000 the European population suffered declines in many parts of its range, including in some of its key areas (Turkey, Sweden, and Finland).

Oenanthe oenanthe Photo by: Christopher Plummer

Distribution and status in the Baltic Sea region

The very large Swedish and Finnish populations have recently suffered considerable declines. The **Swedish** population is estimated at 180 000–410 000 bp, of which *c.* 70% live in the mountain area. Ottvall *et al.* (2009) estimate the decline to 10–19% for the recent 10 year period; the long-term trend is also given as declining. However, in the mountain area the population is not declining, at least not much.

In **Finland**, the decline is estimated at 40% during the period 1990–2000 (BirdLife International 2004), but is currently (2000–2010) up to 58%. The species is assessed as *Vulnerable* (VU) in Finland. The overall distribution in Finland has been diminishing by 29% during the last 10 years (no. of Atlas grids). According to line transect data; there has been a steady population decline of 2.0% p.a. since 1975. The

decline only concerns the inland population, whereas the coastal and the northern mountain populations have not changed much.

The population in the eastern Baltic countries (**Lithuania, Latvia, Estonia, Baltic Russia**) is large and about stable in the short-term and probably also in the long-term run.

In **Poland**, the northern wheatear is a widespread breeding bird. Locally, especially in the mountains, peripheries of towns and forest clearings, it may reach higher densities. (Tomiałojć & Stawarczyk 2003). According to results of the national bird monitoring, the population seems to be stable (http://monitoringptakow.gios.gov.pl/app/trendy).

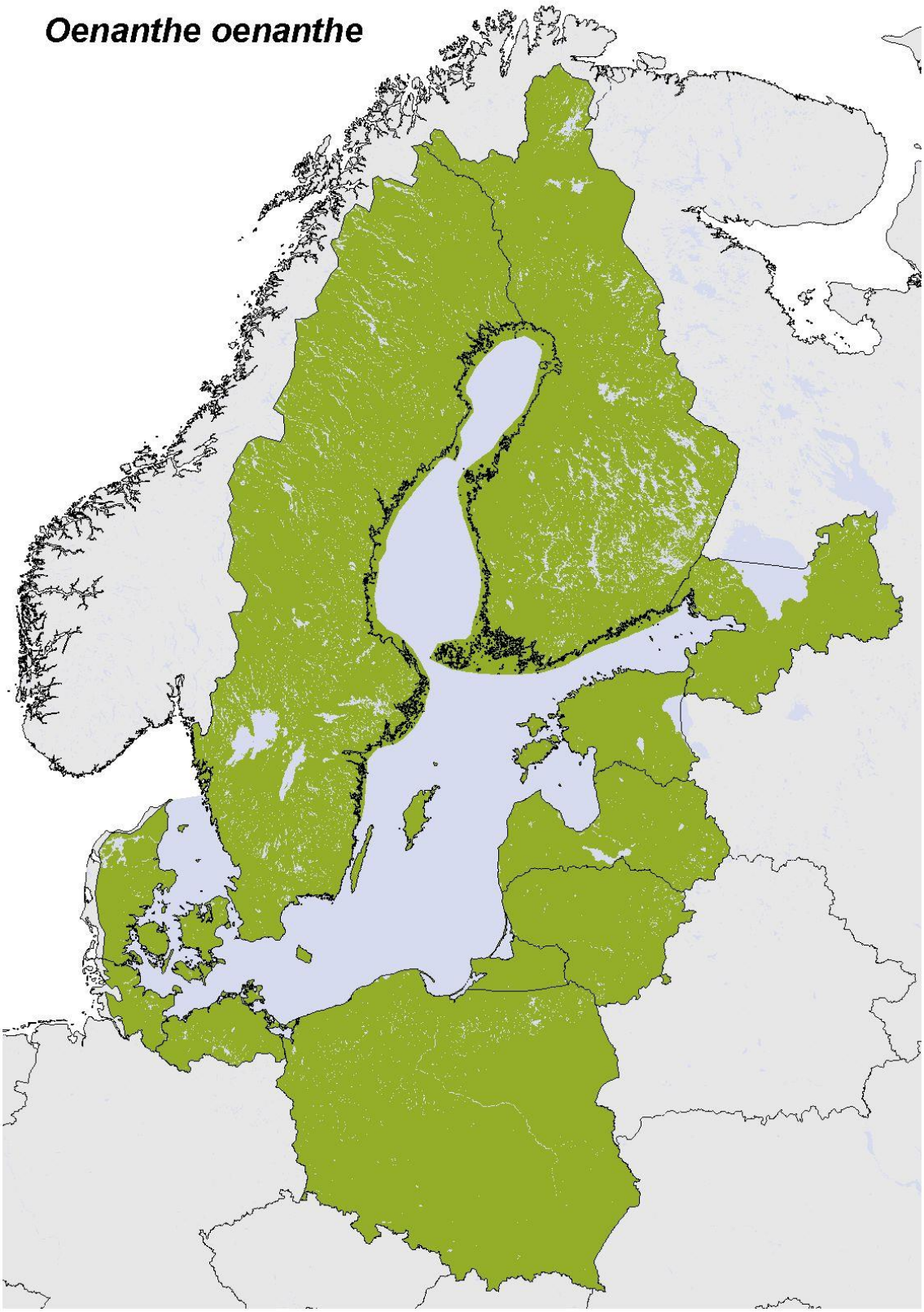
In the western Baltic (**Denmark, German Federal states Schleswig-Holstein** and **Mecklenburg-Western Pomerania**) the northern wheatear is a local, not numerous breeder; it has suffered long-term declines in all parts of this region.

Table 1: Population numbers of the northern wheatear in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, f=fluctuating, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	180 000–410 000	2010	-	-
Finland	50 000–100 000	2009	-	-
Russia, PET	common	2010	0	0
Russia, KAL	?? (population size rather small)	2010	0	f
Estonia	20 000–30 000	2003–2008	0	0
Latvia	10 000–30 000	1990–2000	0	0
Lithuania	5 000–10 000	1999–2001	?	+
Poland	20 000–50 000	2000–2002	0	?
Germany - SH	50	2005–2009	-	-
Germany - MV	900–1000	1994–1998	-	-
Denmark	1 000–2 000	2000	-	-
Baltic Sea	**287 000–633 000**			

SPECIES INFORMATION SHEET *Oenanthe oenanthe*

Distribution map



SPECIES INFORMATION SHEET *Oenanthe oenanthe*

Habitat and ecology

Within its Baltic range, the northern wheatear occupies all kinds of open-ground habitats from coastal islands and arable land to boulder fields in the fell area. It is also common in most man-made habitats in industry, agriculture and forestry. Across the archipelago zonation of the Baltic Sea, the wheatear is more maritime than the Wagtail (Numers 1995), being less numerous in the inner archipelago zone. Compared to Wagtail and Rock Pipit – the other two maritime passerines – the wheatear breeds singularly; it is a strict cavity-nester. Nests are well hidden under stones and boulders or in crevices in cliffs, but also rabbit burrows. The shelter from sun and rain apparently enables nestlings to maintain stable body temperature, this possibly being one reason for the species' wide range of extreme habitats (Verbeek 1988).

Description of major threats

Since the decline refers mainly to the inland, but not to the coastal and mountainous areas, changes in farming and forestry practices are likely to play a role. These environments have faced drastic intensification of land use leading to less stony pasturage, less open logging areas, and less mosaic-like landscape pattern. Wheatears are probably producing less well in suboptimal habitats, although there are no proper population studies done in these environments. The species is a long-distance migrant, wintering in sub-Saharan Africa and possibly suffering from the frequent draughts in that area during the post-1960 era. It is difficult to see how the carry-over effects from Africa would affect only the inland population unless there is a difference also in the reproduction rate among habitats.

Assessment justification

In its main Baltic breeding area, during the last 10 years the northern wheatear has declined by *c.* 10% (Sweden) and 58% (Finland), respectively. It is also declining in the western Baltic. However, the species is breeding in this region only in low numbers. The eastern Baltic countries (Lithuania, Latvia, Estonia, Baltic Russia) host strong and stable populations.

The overall trend in the Baltic Sea area is, due to the trend in Sweden and Finland, declining, but the decline obviously did not exceed 30% during the last 10 years. The species hence classifies as *Near Threatened* (NT) according to criterion A2abc.

Recommendations for actions to conserve the species

Since the reasons for the decline are not well understood, it is difficult to propose conservation measures. Population studies and habitat analysis are needed in order to identify why the northern wheatear is suffering such strong declines in some areas.

Common names

Denmark: Stenpikker, Estonia: Kivitäks, Finland: Kivitasku, Germany: Steinschmätzer, Latvia: Akmeņčakstīte, Lithuania: Kultupys, Poland: białorzytka, Russia: Каменка, Sweden: Stenskvätta

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SPECIES INFORMATION SHEET *Tringa totanus*

English name: **Redshank**	Scientific name: ***Tringa totanus***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Scolopacidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03), Construction (J02.01), Alien species (I01), Competition and predation (I02), Extra-regional threats (hunting; XO)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (A04.03), Alien species (I01), Competition and predation (I02), Extra-regional threats (hunting; XO)	
IUCN Criteria: **A2ac**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive -yes Annex II EU Birds Directive-II B (DK, FR, IT)	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: LC, Estonia: LC, Finland: NT, Germany: V (Near threatened), Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: –, Russia: –, Sweden: LC		

Range description and general trends

The redshank is a widespread breeder across much of Europe. The European breeding population counts >280 000 bp, of which about 10–15% are breeding in the Baltic Sea area. The species has undergone a moderate decline across much of its European range, and this trend is also true for the Baltic Sea area.

Tringa totanus. Photos by Jürgen Reich.

Distribution and status in the Baltic Sea region

The **Swedish** population counts about 15 000–25 000 bp, of which 11 400 are found in the mountain area and 7 500 bp at the Baltic coast. Another 400 bp breed at the Swedish Skagerrak coast (province of Bohuslän), outside the Baltic Sea area. On the Baltic Sea coast however the population has suffered a decline during the last 30 years and this decline is believed to have continued also into the 21 century.

In **Finland**, the species occurs along the coasts and scattered in the inland. The population has been declining during recent decades, the overall decline being about 26% in the last 10 years. With -22% the trend has been similar in the archipelago.

In **Russia**/PET the population is characterised by considerable fluctuations, however, the short term trend seems to be increasing. In appropriate habitats, the species may be found all over the region, but it is more common in the south-western parts.

The population numbers in **Estonia** are estimated at 5 000–7 000 bp, the species is declining both in the short and long term run (Elts *et al.* 2009).

In **Poland**, the redshank is a widespread, but usually scarce breeder in the lowland with highly patchy distribution. The species prefers flooded meadows and pastures along rivers with muddy banks. It is most numerous in central and eastern Poland. Important breeding areas are the Biebrza (240 bp), Narew (326 bp) and lower Bug valleys. In western Poland, the Ujście Warty National Park hosts a larger population (80 bp), in southern Poland the Nida river valley (112–131 bp). The recent population trend is negative. Surveys in western Poland during the periods 1980–1990 and 2000–2010 revealed a decrease of the species by 57.8% (Ławicki *et al.* 2011). The total Polish population is estimated at 2 000–2 500 bp (Sikora *et al.* 2007).

At the **German** Baltic coast the breeding population of the redshank counts 400–470 bp. In former times, the redshank was also a widespread breeder on inland meadows, but got much reduced in these areas.

Redshanks are widespread in coastal meadows along all Baltic coasts of **Denmark**, but survey data are sparse. Based on data from Fuglenes Danmark (Grell 1998) and unpublished information, Thorup (2006) estimated the Danish total population in the 1990s at 12 000–15 000 bp, of which 6 000–7 000 bp were breeding in the Baltic Sea area. Since then the population has apparently been stable or slightly declining. Between the two Danish Bird Atlases 1971–1974 and 1993–1996, the redshank disappeared from several inland squares (Grell 1998), but the magnitude of the decline in numbers is difficult to estimate. In 32 coastal meadows in the former Storstrøms Amt the number declined with 19% from the late 1980s to 2003 (Jørgensen 2006), whereas numbers were increasing on Læsø from 1973 to 1996 (Møller 1975, Rasmussen 1996 unpublished) and Saltholm from 1976 to 1999 (Mortensen & Hansen 1999).

SPECIES INFORMATION SHEET *Tringa totanus*

Table 1: Population numbers of the redshank in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, F=fluctuating, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	year		
Sweden[1]	15 000–25 000	2010	0	-
Finland	5 200	2009	-	+
Russia, PET	250–500	2009	+ (F)	?
Russia, KAL	50–60	2003–2009	-	-
Estonia	5 000–7 000	2003–2008	-	-
Latvia	300–700	1990–2000	-	?
Lithuania	600–800	1999–2001	-	-
Poland	2 000–2 500	1995–2002	-	?
Germany – SH	220	2005–2009	-	-
Germany – MV	160–250	2005–2009	0	-
Denmark	6 000–7 000	1990s	0 (or slightly -)	?
Baltic Sea	**35 000–49 000**			

[1] This numbers include *c.* 400 bp breeding in Bohuslän, outside the Baltic Sea area.

SPECIES INFORMATION SHEET *Tringa totanus*

Distribution map

SPECIES INFORMATION SHEET *Tringa totanus*

Habitat and ecology

The redshank breeds on marshland, including salt marshes, usually formed by grazing. It is not an exclusively coastal bird, but the highest abundances in the southern Baltic and at the North Sea are reached on coastal grasslands. In the northern archipelagos, the species frequents all zones fairly evenly, typically occurring on rocks and skerries with patchy grass vegetation. It associates with small larids to a greater extent than expected merely from habitat distribution, whereas larger Gulls seem to repel redshanks (Numers 1995).

Description of major threats

The reasons for the decline relate to overgrowth of suitable coastal habitats and to increased predation. At the German Baltic coast, the long-term trend has been declining, with habitat loss obviously being a main factor. However, increased predation by mammals has been an important factor in recent times. There is a clear trend of decline of redshank numbers on coastal meadows with unlimited access of predatory mammals, whereas the numbers on islands from which the predatory mammals are removed has been about constant (Herrmann 2010). In the northern Baltic, it is also suggested that the redshank suffers from increased predation pressure even on small islets after the expansion of larger Gulls and corvids there (*e.g.* increase of the raven *C. corax* in the archipelago).

The redshank currently is only hunted in France. The annual hunting bag is estimated at 5–8 000 birds but the real present figure is unknown. It has to be assumed that hunting may contribute to the decline (European Commission 2009).

Assessment justification

The overall observed decline in the Baltic Sea area over 3 generations (18 years) exceeds 15%, but is <20%, and the species meets the criteria A2ac under *Near Threatened* (NT).

Recommendations for actions to conserve the species

The main measures to conserve the species are a grazing and water management at the breeding existing sites directed to the habitat requirements of the species. Habitat restoration (restoration of the natural flood regime of coastal and riverine polders; establishment of appropriate grazing regimes) of former or potential breeding sites is also recommended. Control of predatory mammals is essential for many breeding sites. Though hunting is probably not the main factor for the decline, it poses an additional pressure and should be banned. The species should be deleted from Annex II of the EU Birds Directive.

Common names

Denmark: Rødben, Estonia: Punajalg-tilder, Finland: punajalkaviklo, Germany: Rotschenkel, Latvia: Pļavas svilpis, Lithuania: Raudonkojis tulikas, Poland: Krwawodziób, Russia: Травник, Sweden: Rödbena

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SPECIES INFORMATION SHEET *Vanellus vanellus*

English name: **Lapwing**	Scientific name: ***Vanellus vanellus***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Charadriidae	Species authority: Linnaeus, 1758	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): Ditching (J02.01, J02.04), Changes in agricultural management (A02), Alien species (I01), Competition and predation (I02), Hunting (F03.01)	Future threats (Habitats Directive article 17 codes): Ditching (J02.01, J02.04), Changes in agricultural management (A02), Alien species (I01), Competition and predation (I02), Hunting (F03.01)	
IUCN Criteria: **A2bc**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category LC / VU (A2b; A3b,c)	Annex I EU Birds Directive -no Annex II EU Birds Directive- II B (BE, DK, EL, ES, FR, IE, IT, MT)	
Red List status in HELCOM countries: Denmark: LC, Estonia: LC, Finland: LC, Germany: 2 (Endangered), Latvia: –, Lithuania: –, Poland: –, Russia: –, Sweden: LC		

Range description and general trends

The lapwing has a wide breeding range from the Atlantic to the Pacific Ocean between 35º and 70º of northern latitude. The global population is concentrated in Europe, where the species now has an unfavourable conservation status. Its European breeding population was probably fairly stable until around 1990, but since then the species has suffered significant declines across most of Europe and underwent a large decline (>30%) overall during 1990–2000. Consequently, on the European level, it is now evaluated as vulnerable. The European population of the lapwing is estimated at 1.7 to 2.8 million breeding pairs. The available demographic data indicate that the ongoing population decline is mainly caused by an insufficient production of fledglings, due to an increased clutch failure rate, reduced possibilities of re-nesting and poor chick survival, as a consequence of agricultural intensification and change in land use.

Vanellus vanellus. Photos by Lech Karauda (left) and Frank Joisten (right).

According to data from the European Bird Census Council covering 21 countries, the European population underwent a decline of nearly 30% during the period 1990–2008 (Vorisek 2008). Since 1970, declines of the breeding populations have been reported from all European countries holding more than 50 000 bp: Finland (1970–1990), Sweden (1970–1990), Norway (1970–2000), UK (1970–2000), Germany

(1970–2000), Hungary (1970–2000), Netherlands (1990–2000), Russia (1990–2000), Belarus (1990–2000), Poland (1990–2000) and Ukraine (1990–2000). The important Dutch population has decreased a further 2% per year since 2000.

Distribution and status in the Baltic Sea region

In **Finland** and **Sweden**, the lapwing has declined during the period 1970–1990; however, since the 1990s the populations have been increasing rapidly, being currently 40% (Finland) and 10–19% (Sweden) larger than 10 years ago and possibly exceeding the level of the 1980s.

In **Estonia**, the lapwing has suffered a strong decline (>50%) during the period 1971–1990, but is increasing since the late 1990s. For the period 1998–2002, Elts *et al.* (2003) give a population number of 25 000–40 000 bp, which has increased to 40 000–60 000 bp in 2003–2008 (Elts *et al.* 2009).

In the **Kaliningrad Region** of **Russia**, the breeding population of the lapwing is estimated at 2 500–3 000 bp, with a declining trend in recent years. In the St. Petersburg Region of Russia it is a common breeding bird with seemingly increasing trend in the short and long term.

In **Poland**, the lapwing is a widespread breeder in the lowland and on the foothills of the mountains.

It is found all over the country up to altitudes of 900 m. It is most numerous in the eastern river valleys (*e.g.*, Biebrza, Narew, Bug and Nida; Tomiałojć & Stawarczyk 2003; Sikora *et al.* 2007). Surveys in western Poland during the periods 1980–1990 and 2000–2010 revealed a decrease of the species by 66.1% in this region (Ławicki *et al.* 2011). According to data from the Polish common Bird Census, the decline of the species for the whole country was 34% between 2000 and 2004.

In **Germany, Mecklenburg-Western Pomerania**, the population has declined from 6 000-8 000 bp in 1978–1982 to 2 500–3 000 in 1994–1998, which means a decline of about 60% within 3 generations (Prill & Stegemann 2006). The negative trend has continued since then. A major reason for this trend was the eradication of rabies during the 1990s. Currently, only the bird sanctuaries on coastal islands with strict management of predatory mammals still host stable breeding pair numbers (Herrmann 2010).

In **Schleswig-Holstein**, the lapwing breeds on grassland and arable land, but reaches especially high densities on the salt marshes of the North Sea coast. The total population counts c. 12 500 bp, of which 3 800 bp are breeding in the eastern inland parts of Schleswig-Holstein and close to the Baltic Sea. Declining trends have been reported already at the end of the 19th century. Studies on breeding pair densities on marsh- and grassland indicate a strong decline especially during the 1980s and 1990s. The negative trend seems to continue until now. Changes in agricultural management practices and predatory mammals are seen as main factors (Berndt et al. 2002).

In **Denmark**, only few counts of breeding lapwings are performed on important bird breeding sites – in particular coastal meadows - outside DOF (Danish Ornithological Society) project periods. During the last project 'Fuglenes Danmark' in 1993–1996 (Grell 1998), together with the Wadden Sea programme (Thorup & Laursen 2008) and annual counts at Tipperne and Vejlerne, 9 900–11 700 pairs were counted at 'bird sites'. In the same period (1995–1999), Thorup (2006 and unpublished) estimated 30 000–41 500 pairs on cultivated land, based on a rather small sample of agricultural areas in different parts of Denmark.

Data from the rather few sites with frequent counts of lapwings show that the species is doing quite well on coastal meadow sites with a proper meadow habitat management. This is the case in Baltic Denmark as well as in North Sea Denmark. However, a number of small coastal sites are not managed well, and overgrowing, drainage and fragmentation of open meadows is a problem in many regions in

the Danish Baltic. For instance, on 32 coastal meadow sites in the former Storstrøms Amt the number of breeding lapwings declined by 42% between the late 1980es and 2003, whereas numbers increased significantly on those sites where particular management effort took place (Jørgensen 2006). In the same period, breeding numbers increased markedly on Læsø (P.A.F. Rasmussen 1996 unpublished) and Saltholm (Jensen 1987, Mortensen & Hansen 1999, M. Jørgensen 2006, unpubl.).

The Danish point count programme basically reflects trends away from the coastal meadows. If 1978 is set at index 100, the index in 1988 was at 116, 1998 at 75 and 2008 at 66 (Heldbjerg & Eskildsen 2010). It is unknown whether trends are different in the North Sea and the Baltic part of Denmark.

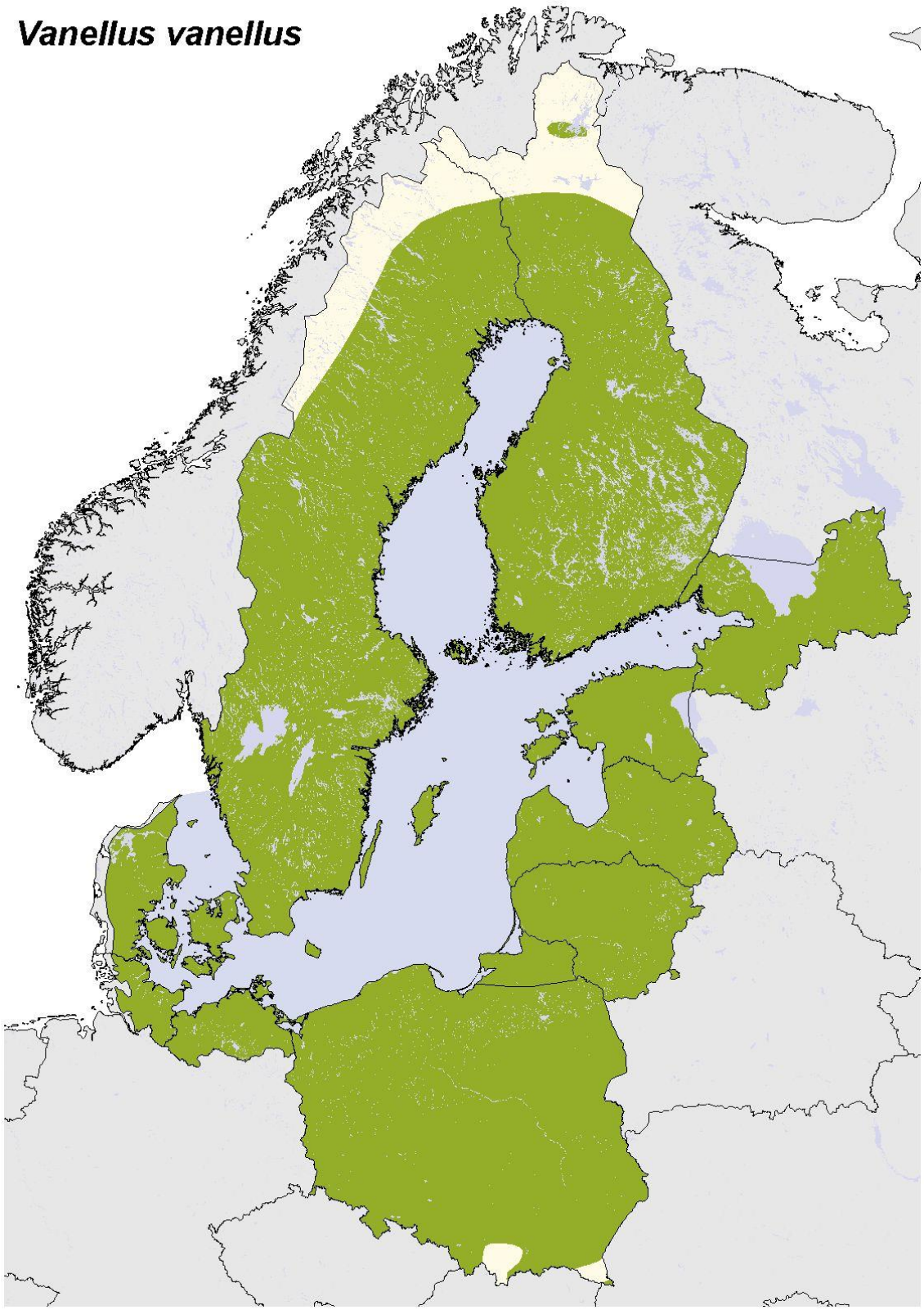
A rough subdivision of the Danish breeders in the late 1990s into Baltic and North Sea populations would be that half of the birds breeding on coastal meadows and half of the farmland lapwings are Baltic, giving some 22 000 pairs in the Danish Baltic Sea areas. Since then the numbers may have declined by 10–15%, giving a 2010 total of some 19 000–20 000 pairs in the Baltic. The earliest point count index is from 1976 and is 3.7 times higher than the latest from 2009 (Heldbjerg & Eskildsen 2010). The numbers in coastal meadows were perhaps 25–50% higher in the mid 1970es, and the Baltic Danish total would then have been in the magnitude of 50 000–60 000 pairs.

Table 1: Population numbers of the lapwing in the Baltic Sea area. For population trends -=decreasing, +=increasing, f=fluctuating.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	48 000–77 000	2010	+	-
Finland	90 000	2006–2009	+	-
Estonia	40 000–60 000	2003–2008	+	-
Russia PET	abundant	2010	+	+
Russia KAL	2 500–3 000	2010	-	f
Latvia	12 000–15 000	1990–2000	-	-
Lithuania	18 000–20 000	1999–2001	-	-
Poland	100 000–150 000	2000–2002	-	-
Germany SH	3 800	2005–2009	-	-
Germany MV	2 500–3 000	1994–1998	-	-
Denmark	19 000–20 000	2010	-	-
Baltic Sea	**340 000–440 000**			

SPECIES INFORMATION SHEET *Vanellus vanellus*

Distribution map



SPECIES INFORMATION SHEET *Vanellus vanellus*

Habitat and ecology

Originally, the species bred in grassy habitats (steppes, open grassland, peat bogs, moorland) where the structure of the vegetation remained short due to natural conditions. Natural sites still occupied are coastal marshes, fens, bogs, moors and upland grasslands (up to 800–1000 m). Forest clearance and the expansion of livestock rearing considerably increased the availability of suitable areas, and lapwings are now widely distributed in semi-natural habitats such as meadows and pastures (Cramp & Simmons 1983). Vegetation heights below 15 cm are strongly preferred (Lister 1964, Flodin *et al.* 1990). Winter flooding improves conditions for breeding lapwings by keeping the sward short and open and by creating suitable, wet feeding areas (Ausden *et al.* 2001).

Lapwings nest in high abundances on arable land, where spring-sown fields offer suitable breeding conditions for a short period. Proximity of good feeding areas for the chicks is essential; such feeding areas may be found on the fields or meadows used for grazing or on adjacent grassland (Galbraith 1988, 1989).

Outside the breeding season the species frequents a wide variety of habitats, such as cultivated fields, wide expanses of grassland, lake or river margins, estuaries etc. Lapwings seemingly prefer cultivated areas for feeding, but also grasslands and mudflats are used.

Description of major threats

The main reasons are obviously both agricultural intensification, in particular a large-scale shift from spring-sown to autumn-sown crops in the southern Baltic, and an increase of abundance of predatory mammals. Autumn-sown crops are not suitable for breeding, since the vegetation at the beginning of the breeding season is too high. Better drainage, leading to fewer left-over small wet patches in the fields, is also reducing the breeding opportunities on arable land.

The available estimates of the bag size indicate that the annual harvest of the lapwing amounts to less than 9% of the autumn population. Hunting is not the prime reason for the population declines, but it may hinder the recovery of the species (European Commission 2009).

Assessment justification

The lapwing has suffered heavy declines during the period 1970–1990. However, since then the declines seem to have slowed down or the population even has stabilized in several Baltic countries with large populations. For Estonia, Finland, Sweden and the St. Petersburg Region of Russia, even increases are reported (Elts *et al.* 2003, 2009; Lindström *et al.* 2011). Hence, considering the recent trends, the decline during the last 3 generations (15 years) is, from a whole-Baltic perspective, obviously <30%, i.e. the criteria for Vulnerable (VU) are not reached. The species is classified as Near Threatened (NT) according to criterion A2bc.

Recommendations for actions to conserve the species

The agricultural management of the meadow breeding existing sites should be directed to the habitat requirements and breeding performance of the species. Especially the incidental destruction of clutches and killing of chicks by agricultural machinery has to be avoided. Habitat restoration (restoration of the natural flood regime of coastal and riverine polders; establishment of appropriate grazing regimes) of former or potential breeding sites is also recommended. Appropriate structures for breeding and chick rearing on arable land should be conserved (e.g. temporary or permanent wet patches).Control of predatory mammals is essential for sites with high concentrations of breeding lapwings (e.g., some coastal bird islands, where the lapwing usually breeds together with other grassland waders like redshank and black-tailed godwit). Though hunting is probably not the main factor for the decline, it poses an additional pressure and should be banned. The species should be deleted from Annex II of the

EU Birds Directive.

Common names

Denmark: Vibe, Estonia: Kiivitaja, Finland: Töyhtöhyyppä, Germany: Kiebitz, Latvia: Ķīvīte, Lithuania: Gyvė, Poland: czajka, Russia: Чибис, Sweden: Tofsvipa

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SPECIES INFORMATION SHEET *Sterna sandvicensis*

English name: **Sandwich tern**	Scientific name: ***Sterna sandvicensis***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae	Species authority: Latham**,** 1787	
Subspecies, Variations, Synonyms: –	Generation length: 8 years	
Past and current threats (Habitats Directive article 17 codes): –	Future threats (Habitats Directive article 17 codes): –	
IUCN Criteria: –	**HELCOM Red List Category:**	**LC Least Concern**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive yes Annex II EU Birds Directive: no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I)* Denmark: LC, Estonia: LC, Finland: –, Germany: 2 (Endangered), Latvia: –, Lithuania: –, Poland: CR, Russia: –, Sweden: EN		

Range description and general trends

The European and West-Asian subspecies of the sandwich tern *Sterna sandvicensis sandvicensis* colonises the coasts of the Atlantic Ocean (including North and Baltic Sea), the Mediterranean and Black Sea, and Caspian Sea. In the Baltic Sea (central Sweden/Estonia), the species reaches its actual northern range limit. As a typical shore bird, the breeding sites of the sandwich tern are restricted to the coast.

The Atlantic population of the sandwich tern amounts about 55 260–57 035 breeding pairs (bp) (Wetlands International 2006, BirdLife International 2004). The range centre is the North Sea, where the species colonises the coasts of Great Britain (12 500 bp), the Netherlands (14 500), Belgium (1 550), Germany (8 000–10 000), and Denmark (3 700–6 100) (Hälterlein et al. 2000, BirdLife International 2004, Gregersen 2006). France (6 800) as well as Ireland (1 800) are also hosting considerable breeding populations. The Spanish breeding population, however, belongs to the Mediterranean Sea. In southern Norway, the sandwich tern breeds only sporadically (Herrmann et al. 2008).

During the 1990ies, the North Sea population has been stable in the Netherlands, Germany and Denmark, but was declining in Great Britain (BirdLife International 2004, Gregersen 2006). In most recent times, however, the German North Sea population underwent a decline to only 5 681 bp in 2005, which was the lowest number since 1975 (Garthe & Flore 2007). At the same time, the Danish population was increasing, reaching about 6 100 bp in 2006.

The population of the Mediterranean and Black Sea is estimated at 20 270–65 670 bp and about 6 500 – 10 000 bp in the Caspian Sea (Wetlands International 2006, BirdLife International 2004).

Distribution and status in the Baltic Sea region

During the first half of the 20th century, the sandwich tern was obviously not a very common breeding bird at the Baltic coasts of Denmark (central Kattegat, the Belt Sea and the Sound). The species was missing in the Central Baltic. The coasts of the south-western and central Baltic Sea were colonised

gradually, starting in the 1930s on the Swedish east coast: the sandwich tern appeared first on Öland (1934) and short time after on Gotland (1938). Blekinge was colonised in 1960, Småland, after first attempts in 1947 and 1960, starting from 1970. In 1975, the so far most northern breeding place was recorded in the Stockholm archipelago.

At the south-western and southern Baltic coast, during the first half of the 20th century the sandwich tern was a very sporadic breeding bird in Schleswig-Holstein (Oehe-Schleimünde, 1919–1921, 1930–1936, 1939, with maximum of 92 bp) and at the Bold Vistula mouth (Śmiała Wisła) in Gdansk (1929 and 1932–1936, up to 3 bp). The permanent colonisation and development of a larger, stable population in the south-western Baltic, however, did not happen before the end of the 1950s, starting with the establishment of a colony on the island Heuwiese near Rügen (Mecklenburg-Western Pomerania) in 1957 (Herrmann et al. 2008).

At the beginning of the 1960s, the sandwich tern started to expand its range to the southern and eastern coasts of the Baltic Proper (Poland and Estonia). In Estonia, the first breeding dates from 1962. From then on, the population increased steadily. At the beginning of the 1970ies, the first larger and stable colonies were formed on small islands at the west coast of Saarema. In Poland, the sandwich tern was breeding from 1977–1991 in the nature reserve Mewia Łacha (Gull Shoal) at the Vistula Cut mouth (Przekop Wisły) near Swibno/Mikoszewo with a maximum of 290–300 bp After 1991, the sandwich tern disappeared for several years as a breeding bird. In 2006, however, a new colony with 140 bp was formed on a jetty in the port area of Gdynia. Due to repair works on this jetty, in 2007 the birds returned to their traditional breeding place at the Vistula Cut mouth (nature reserve Mewia Łacha). The number of breeding pairs was fluctuating between 100 and 400 bp from 2007 to 2012 (Herrmann et al 2012).

The Baltic population of the sandwich tern continued to grow until the 1970s. Since Danish population numbers of that time do not permit separation between North Sea and Baltic Sea breeding sites it is difficult to give exact numbers for the Baltic Sea area. However, in 1975 the numbers reported for Sweden, Mecklenburg-Western Pomerania and Estonia give a total of about 2 000 bp. The Danish numbers given for the 1970s and 1980s vary between 2 500 and 5 000, about the same level as during the period 1994–2012 (Herrmann et al. 2008, Figure 1).

Continuous time series are available now for the period 1994–2012, except for Estonia, where the population is estimated to be about stable at a level of 600–900 bp (Elts et al. 2009). Some recent Estonian data concerning the distribution and numbers of sandwich terns have been gathered within the framework of an inventory of breeding birds on small maritime islands in 2008–2011. According to the results of this inventory the breeding population in Estonia was estimated to 700–900 bp in 2010 (Herrmann et al. 2012).

The total Baltic numbers give a breeding population in the range of 2 200–5 000 bp (Fig. 1). This suggests that, despite some fluctuations, the population was more or less stable from the mid-1970s until now. One reason for the fluctuations is the common shift of sandwich terns between Danish North Sea and Baltic Sea breeding sites.

Currently, the Danish areas of the Baltic Sea, especially the Northern Kattegat (Hirsholmene, 1 975 bp in 2012) and the Central Kattegat and Storebaelt (1 635 bp in 2012), host the largest colonies and the highest number of breeding pairs. However, the colony sites are characterised by strong fluctuations. In previous years, several colonies have been abandoned due to intrusion of foxes (e.g., Siø 2010), but also new colonies have been formed (e.g. Glaenø Østerfed in 2010). The general situation is characterized by a declining trend in the southern part of Denmark and an increasing trend in the southwestern Kattegat and Storebelt (especially Sprogø and Hiarnø with a total of 1457 bp in 2011).

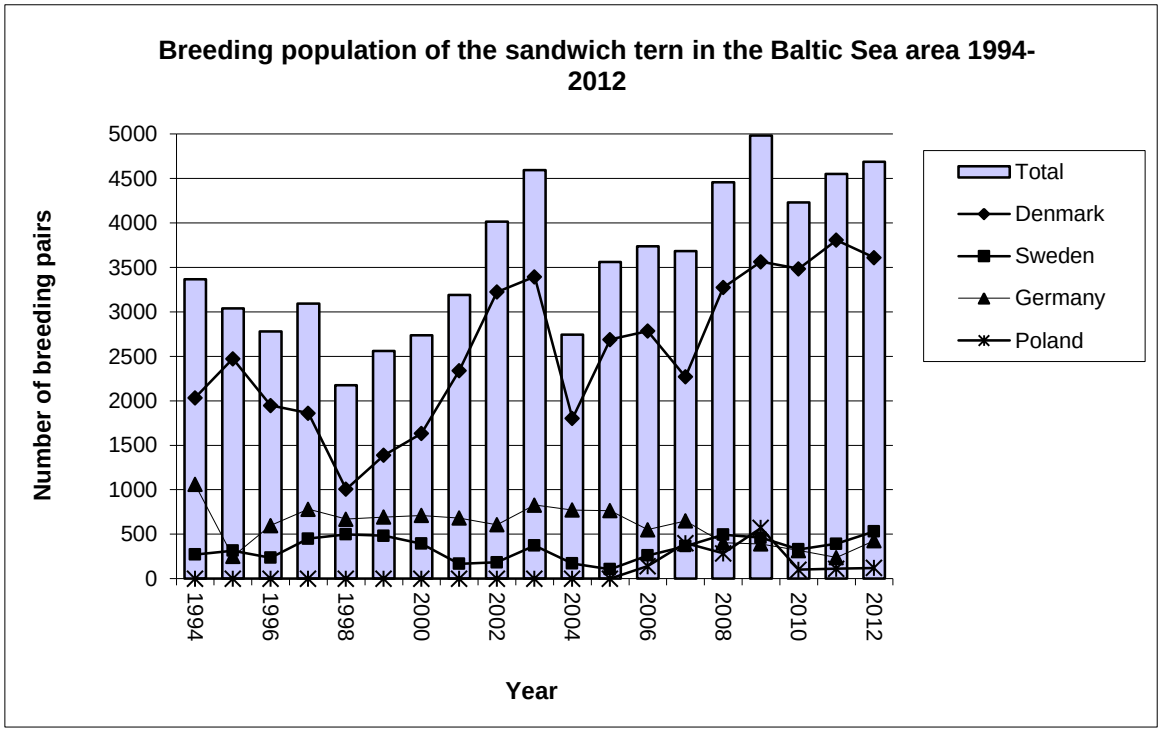

Figure 1: The breeding population of the sandwich tern in the Baltic Sea area 1994–2012. Detailed data from Estonia are not available and hence cannot be shown in the graph. About 600–900 bp from this country have to be added to the total.

Table 1: Population numbers of the sandwich tern in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, f=fluctuating.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	531	2012	f	f
Estonia	700–900	2010	0	+
Poland	120	2012	+	f
Germany SH	0	2012	-	f
Germany MV	426	2012	-	f
Denmark	3 610	2012	f	f
Baltic Sea	**5 400–5 600**			

Distribution map

Not included

Habitat and ecology

The sandwich tern breeds on seabird islands on grassland, occasionally also on dunes or gravel areas, in association with black-headed gulls (*Larus ridibundus*). Usually they prefer large Black-headed Gull colonies of several hundred to thousand breeding pairs, but occasionally they also may breed in association with a small number of Black-headed Gulls. The fluctuation of gull colonies is one reason for

the frequent changes of breeding sites. Even very large tern colonies may disappear from one year to another, if the Black-headed Gulls abandon the site.

Description of major threats

The main threat to the species is the occurrence of predatory mammals on the breeding sites. Human disturbances, especially recreational activities, represent another threat factor. In the West-African wintering areas, hunting causes losses of individuals, probably in significant numbers.

Assessment justification

The population is > 2 000 mature individuals and obviously stable. Hence, none of the criteria A–D is met, the species classifies as Least Concern (LC).

Recommendations for actions to conserve the species

The main conservation measure for the sandwich tern is the protection of suitable breeding sites. These are small islands covered by low grass vegetation, without human disturbances and predatory mammals. The exclusion of human disturbances as well as predatory mammals (especially foxes, but also feral mink *Mustela vison*) from those islands is the main conservation measure required. The impact of the newly immigrated racoon dddog (*Nyctereutes procyonoides*) on coastal bird colonies is not yet well investigated. However, the diet of this species and its recent appearance on coastal bird islands should give reason to focus attention on its influence on coastal birds.

Common names

Denmark: Splitterne, Estonia: Tutt-tiir, Finland: Riuttatiira, Germany: Brandseeschwalbe, Latvia: Cekulzīriņš, Lithuania: Margasnape žuvedra, Margasnapė žuvėdra, Margasparnė žuvėdra, Poland: Rybitwa czubata, Russia: Пестроносая крачка, Sweden: Kentsk tärna

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SPECIES INFORMATION SHEET *Sternula albifrons*

English name: **Little tern**	Scientific name: ***Sternula albifrons***	
Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae	Species authority: Pallas**,** 1764	
Subspecies, Variations, Synonyms: –	Generation length: 8 years	
Past and current threats (Habitats Directive article 17 codes): –	Future threats (Habitats Directive article 17 codes): –	
IUCN Criteria: –	**HELCOM Red List Category:**	**LC Least Concern**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive-yes Annex II EU Birds Directive-no	
Protection and Red List status in HELCOM countries: *Subject of special conservation measures in the EU Member states (Birds Directive, Annex I) and in Russia (Red Data Book of the Russian Federation)* Denmark: NT, Estonia: NT, Finland: EN, Germany: 1 (Critically endangered), Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: NT, Russia: 2 (declining population), Sweden: VU		

Range description and general trends

The subspecies *Sternula albifrons albifrons* breeds from western Europe to NW Africa and SW Asia. In Europe, it is a scattered breeder along the coasts, but also inland on river banks. The European breeding population is relatively small (35 000– 55 000 breeding pairs). The general European population trend is moderately declining, and the same seems to be true for the Baltic Sea (BirdLife International 2004).

Distribution and status in the Baltic Sea region

The little tern is a breeding bird of all parts of the Baltic. However, the main breeding places are found along the coast of the central and south-western Baltic, whereas the species is scarce in the northern parts. It may also breed on inland river banks. Despite strong fluctuations of the breeding pair numbers in some regions, the general trend seems to be stable both in the long and short term. Local or regional fluctuations are probably rather a result of shifts between breeding sites than a result of changes in the general population size.

In **Sweden**, the little tern breeds mainly along the west coast and east coast up to Gotland. Further north, there are only few breeding pairs at the Bothnian Bay coast (province of Norrbotten). The population size was estimated at 540 bp in 1973 and 460–550 bp between 1989 and 2004. The highest numbers are found on Gotland (c. 250 bp), followed by Scania (75–120 bp), Blekinge (50 bp), Halland (35–70 bp), Öland (40 bp) and Småland (5–10 bp; Tjernberg & Svensson 2007).

Finland hosts only a small population of 55–65 bp, which are mainly breeding in the northern part of the Bothnian Bay. The population has recovered from the moderate low in the 1990s, having now reached the previous top of roughly 60 bp from the 1980s. The gross range has been practically unchanged during the last 30 years.

Sternula albifrons became a breeding bird in **St Petersburg** region of **Russia** during the 1960s. At the beginning it was a very rare species, but during the 1990s it became more numerous in the Neva Bay. The population trend is slightly positive, both in the long and short term run. The population is estimated at 100–200 pairs with noticeable annual fluctuations and redistribution all other the Gulf of

Finland. The reason of this redistribution is the fact that many breeding habitats exist only temporarily, such as open places on construction sites (e.g., of Ust-Luga or the dam of St. Petersburg, where colonies existed for a certain time). The **Kaliningrad** region of Russia hosts 40–50 bp. The long term trend is slightly positive, but short term trend is negative with noticeable annual fluctuations.

The **Estonian** population is estimated at 400–700 bp. It has been slightly decreasing during the period 1971–1990, but since then it is increasing (Elts et al. 2003, 2009).

Poland hosts by far the largest population of the Baltic Sea area. However, the main breeding habitats are not found at the coast, but in the valleys of unregulated rivers, where it breeds on sparsely vegetated islands and banks, dunes and dry pastures. The largest population is found along the middle Vistula river (700 bp, but recently declining). At the coast, the little tern is a scarce breeder. The main breeding place is the Vistula mouth with up to 47 bp (Sikora et al. 2007).

In Germany, **Mecklenburg-Western Pomerania**, the largest populations are found on the sandy spits of the island Hiddensee. The only other permanent breeding place is the island Langenwerder. Other sites, like the sandy banks at Darß-Zingst Peninsula or the island Kirr are sporadically colonized. The population size is heavily fluctuating. Almost complete numbers are available for the period 1973–2011, the maximum breeding pair numbers being 132 in 1982, the minimum 30 in 2004 (Hälterlein et al. 2000; Herrmann unpubl.).

In **Schleswig-Holstein**, the situation of the little tern is similar to that found in Mecklenburg-Western Pomerania. From 1984–2009 the population was fluctuating between 78 and 156 bp, without any trend (Hälterlein et al. 2000; Behmann unpubl.).

In **Denmark**, the total population counts about 450–470 bp, of which c. 150 bp are breeding at the Baltic and 300 BP at the North Sea coast (Grell et al. 2004; Nyegaard pers. comm. 2007)

Table 1: Population numbers of the little tern in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, f=fluctuating, (-)=(probably) slightly decreasing, (+)=slightly increasing, ?=unknown.

Country	Population size		Short-term population trend (10 years)	Long-term population trend (50 years)
	Breeding pairs	Year		
Sweden	460–550	1989–2004	0	0
Finland	55–65	2006–2009	+	?
Estonia	400–700	2003–2008	0	+
Russia PET	100–200	2012	(+) (f)	
Russia KAL	40–50	2011–2012	(-) (f)	+
Latvia	150–200	1990–2000	(-)	?
Lithuania	150–200	1999–2001	(f)	?
Poland	900–1,000	2000–2002	-	0 (?)
Germany SH	107–143	2005–2009	0 (f)	0 (f)
Germany MV	73–105	2006–2011	0 (f)	0 (f)
Denmark	150	2010	0	0
Baltic Sea	**2 600–3 150**			

Distribution map

SPECIES INFORMATION SHEET *Sternula albifrons*

Not included

Habitat and ecology

The main breeding habitats in the Baltic Sea are undisturbed, sandy and gravely banks and spits along the coast. However, the species also breeds inland on similar habitats along unregulated rivers. The species is highly flexible and may shift to other breeding places if the conditions of a certain site get unfavourable. This "unpredictability" is also a strategy against predation.

Description of major threats

Breeding sites of the little tern are mainly sandy or gravely banks at the coast or along rivers, i.e. very dynamic habitats. River regulation or coastal defence measures may prevent the dynamics and deteriorate breeding habitats. Clutches are usually laid not much above the water level. Temporary floods quite often destroy eggs or pulli. If such events will occur with more frequency due to climate change, this factor may get an impact. Predation by predatory mammals (foxes, mink, wild boar) is also a common problem (Grell 1998; Hälterlein et al. 2000). Recreational activities may disturb the breeding places, especially along the coast. However, in many countries the breeding sites are mainly located in bird sanctuaries, due to recreation activities at most other suitable sites. Here, little terns are especially vulnerable to predation

Assessment justification

The population is > 2 000 mature individuals and obviously stable. Hence, none of the criteria A–D is met, the species classifies as Least Concern (LC).

Recommendations for actions to conserve the species

Predator control and protection of breeding areas against tourism (especially islands with restricted access).

Common names

Denmark: Dværgterne, Estonia: Väiketiir, Finland: pikkutiira, Germany: Zwergseeschwalbe, Latvia: Mazais zīriņš, Lithuania: Mažoji žuvedra, Poland: Rybitwa białoczelna, Russia: Малая крачка, Sweden: Småtärna

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SPECIES INFORMATION SHEET *Tadorna tadorna*

English name: **Common shelduck**	Scientific name: ***Tadorna tadorna***	
Taxonomical group: Class: Aves Order: Anseriformes Family: Anatidae	Species authority: Linné 1758	
Subspecies, Variations, Synonyms: –	Generation length: 5 years	
Past and current threats (Habitats Directive article 17 codes): –	Future threats (Habitats Directive article 17 codes): –	
IUCN Criteria: –	**HELCOM Red List Category:**	**LC Least Concern**
Global / European IUCN Red List Category LC / LC	Annex I EU Birds Directive-no Annex II EU Birds Directive-no	
Red List status in HELCOM countries: Denmark: LC, Estonia: LC, Finland: VU, Germany: * (Not threatened), Latvia: –, Lithuania: 2 (V, Vulnerable), Poland: LC, Russia: –, Sweden: LC		

Range description and general trends

The common shelduck is a widespread breeder in coastal areas of north-west and south-east Europe. The European breeding population counts 42 000–65 000 bp. It increased moderately in 1970–1990. During the period 1990–2000 the overall European trend was about stable (BirdLife International 2004).

Distribution and status in the Baltic Sea region

The common shelduck breeds throughout the Baltic Sea. It is rather rare in the northern and eastern parts and more common in the south-western Baltic. The largest populations are hold by Sweden, Denmark and Germany.

The **Swedish** population counts 6 000–9 000 bp. The majority of the population breeds along the coasts but small numbers also breed inland, mainly in Scania and Öland. During the last 30 years the species has increased by >80%, but has been stable in more recent times (Ottvall et al. 2009; Ottosson 2012)).

Finland hosts only a small population of 200–400 bp. The species is strictly coastal; it breeds in the archipelagos of the Bothnian Bay and the Gulf of Finland. The range is expanding and the population size probably increasing (Valkama et al. 2011).

In **Russia** (both St. Petersburg and Kaliningrad regions), **Latvia** and **Lithuania** the common shelduck is a rare breeding bird. **Estonia** holds a larger population of 800–1 200 bp, which has been stable both in the long term as well as short term run.

In **Poland**, the main breeding areas are shallow bays, lagoons and river mouths in the coastal zone, especially Szczecin Lagoon and the Gulf of Gdansk, including Vistula Lagoon. Single pairs are breeding on other coastal lakes. However, the common shelduck is also breeding inland on reservoirs and in the valley of large, slow flowing rivers (Vistula, Odra). The population has declined at the coast, but increased inland (Sikora et al. 2007).

In **Germany, Mecklenburg-Western Pomerania**, the species breeds along the entire coast, mainly in the lagoons and estuaries. However, there are also more or less regular inland breeding records, especially in the Elbe valley. The population seems to be about stable both in the long-term as well as short-term run (Nehls 2006). The breeding distribution in Schleswig-Holstein differs from that in Mecklenburg-Western Pomerania by a much higher coverage of the inland. However, the main breeding areas are the

North Sea and Baltic Sea coasts, with the North Sea hosting much higher numbers than the Baltic Sea (Hälterlein et al. 2000, Berndt et al. 2002).

The common shelduck is a poorly monitored species in **Denmark**. The long term trend is obviously an increase from almost none in the 1920s, some 1500 pairs in the 1960s and some 2500 pairs in the late 1970es. Due to poor data quality the more recent trend is quite uncertain, with opposing trends depending on the focus:

1) An increase in distribution from the 1970s Atlas to the 1990s Atlas by 13%;

2) A 50% decline within the Danish point count programme between early 1980s and today. This probably reflects the situation inland, where the point counts are performed, but it is probably a quite small fraction of the breeding shelducks in Denmark which are found inland.

3) A 100% increase in the nature reserve Tipperne – one of the few sites with regular surveys – in the same period;

4) An increase both in the breeding season and outside the breeding season in the Danish Wadden Sea in the same period.

In Summary, the species is data deficient; however, the existing information suggests that the species may decline inland and perform well at the coast.

It is difficult to estimate the proportions of breeding pairs in the Danish Baltic and North Sea area. Approximately 25–30% of the atlas dots are found in the North Sea area, and 70–75% on the Baltic side. However, this distribution pattern does not necessarily reflect directly the proportions of population numbers. Based on these low quality data, the Baltic Danish population of shelduck may be estimated at some 2 000 pairs and could be stable or slightly declining in the short term. In the long term it was increasing.

Table 1: Population numbers of the common shelduck in the Baltic Sea area. For population trends 0=stable, -=decreasing, +=increasing, (-)=(probably) slightly decreasing, (+)=slightly increasing, ?=unknown.

Country	**Population size**		**Short-term population trend (10 years)**	**Long-term population trend (50 years)**
	Breeding pairs	**Year**		
Sweden	6 000–9 000	2005–2010	0	+
Finland	200–400	2006–2010	+	+
Russia, PET	5–15	2009	+/-	+
Russia, KAL	8–15	2005–2009	+	+
Estonia	800–1 200	2003–2008	+	(+)
Latvia	30–40	2009	-	+/-
Lithuania	30–50	1999–2001	-	?
Poland	120–150	1994–2004	-	-
Germany - MV	150–200	1994–1998	0	0
Germany - SH	530	2005–2009	+	+
Denmark	2 000	2011	+	0 or (-)
Baltic Sea	**9 900–13 600**			

SPECIES INFORMATION SHEET *Tadorna tadorna*

Distribution map
Not included

Habitat and ecology
The common shelduck mainly breeds along sheltered coasts, especially those of lagoons, estuaries and archipelagos. Due to its feeding techniques (dabbling and wading), the species prefers mudflats and tidal areas with low water level. It may also breed inland (e.g., at fish ponds or ponds of wastewater treatment plants), but due to less availability of suitable habitats the inland numbers are very low compared to the population at the coast. The species builds its nests in burrows, e.g. of rabbits or foxes, under or even in buildings, in rock cavities and in dense vegetation. The European population moults in the Wadden Sea. The wintering areas are the Wadden Sea, the Atlantic coast of France and partly also Spain, as well as the Mediterranean Sea, including North Africa.

Description of major threats
Predation by mammals and habitat destruction (e.g., due to tourism, constructions) are potential threat factors. The very large moulting concentrations in river outflows are prone to stochastic hazards e.g. oil incidents and pollution.

Assessment justification
The common shelduck is stable or increasing in its main Baltic breeding areas and is classified as Least Concern (LC).

Recommendations for actions to conserve the species
Predator control at the breeding sites is an important action for conserving the species. The construction of artificial caves may increase local breeding pair numbers.

Common names
Denmark: Gravand, Estonia: Ristpart, Finland: ristisorsa, Germany: Brandgans, Latvia: Sāmsalas pile, Lithuania: Urvine antis, Poland: ohar, Russia: Пеганка, Sweden: Gravand

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