

SPECIES INFORMATION SHEET

Rissa tridactyla

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| English name: Black-legged kittiwake | Scientific name: <i>Rissa tridactyla</i> |
| Taxonomical group: Class: Aves Order: Charadriiformes Family: Laridae | Species authority: Linnaeus, 1758 |
| Subspecies, Variations, Synonyms: <i>Rissa tridactyla tridactyla</i> | 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: <i>Subject of special conservation measures in the EU Member states (Birds Directive, article 4.2)</i> 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).

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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).

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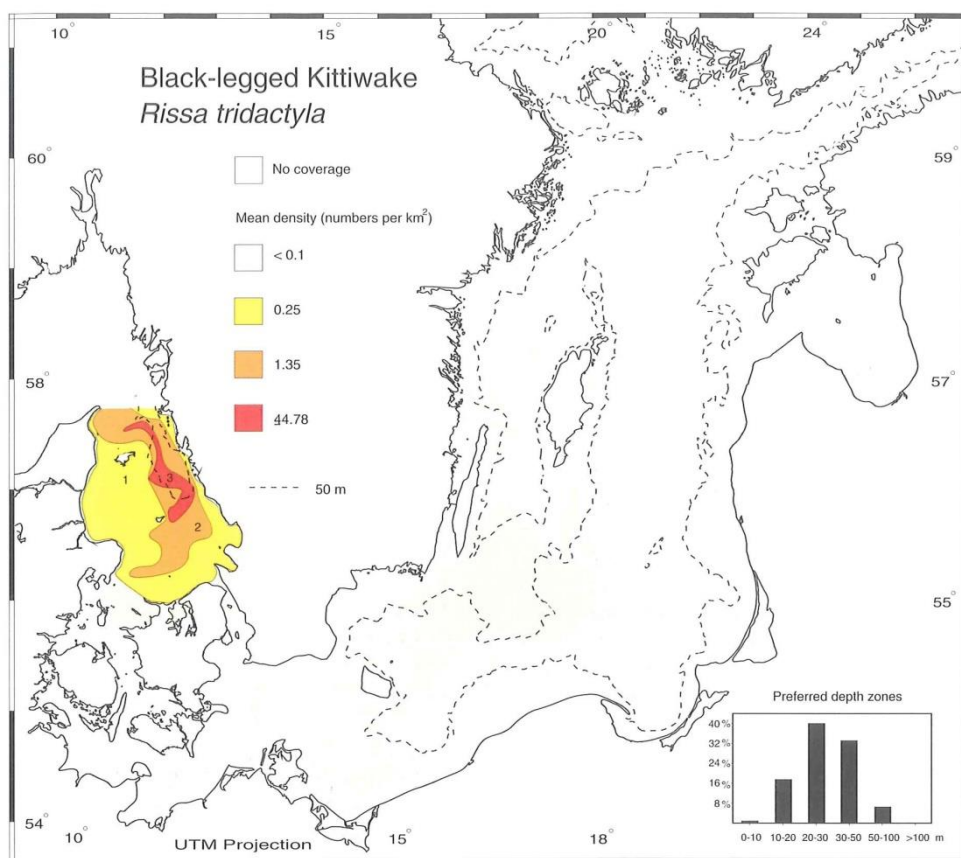
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Fig. 7. Distribution and density of wintering black-legged kittiwakes (*Rissa tridactyla*) in the Baltic Sea, 1988–1993. The histogram shows the proportion of birds recorded in different depth zones during the surveys. From Durinck et al. (1994).

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

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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 ($> 40\,000\text{ km}^2$), 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.

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Common names

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

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