# SPECIES INFORMATION SHEET *Clangula hyemalis* (wintering)

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

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*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).

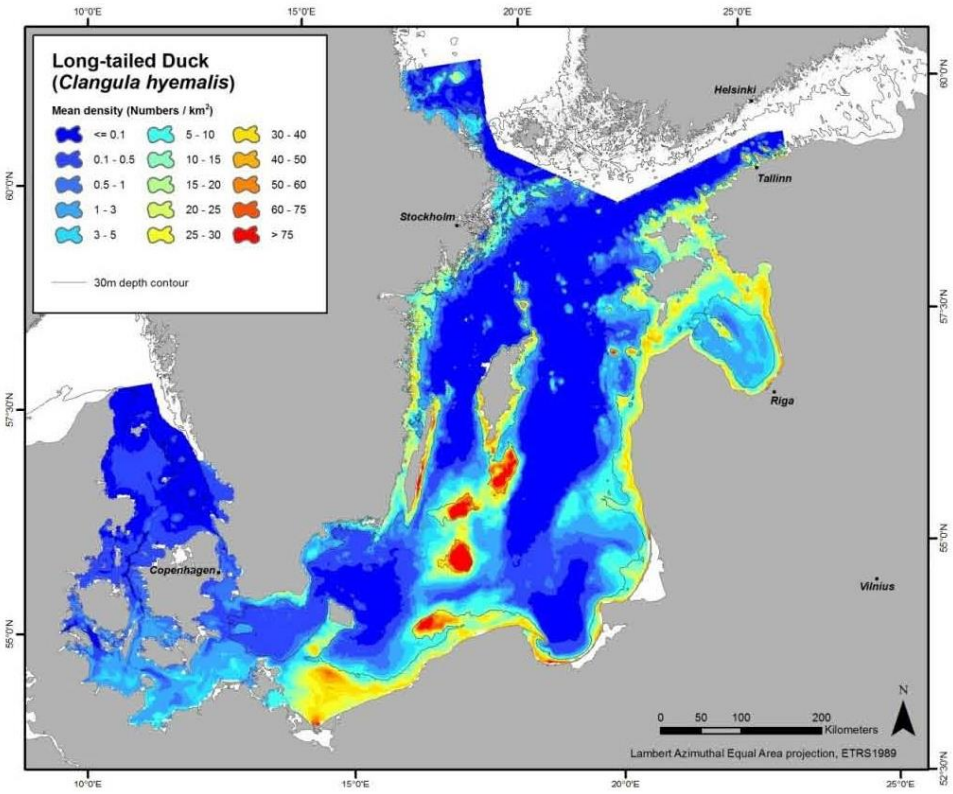


Fig. 1. Distribution and density of wintering long-tailed duck *Clangula hyemalis* in the Baltic Sea, 2007 – 2009. From Skov et al. (2011).

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## 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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