

## SPECIES INFORMATION SHEET

*Podiceps grisegena* (wintering)

English name: <b>Red-necked grebe</b>	Scientific name: <b><i>Podiceps grisegena</i> (wintering population)</b>	
Taxonomical group: Class: Aves Order: Podicipediformes Family: Podicipedidae	Species authority: Boddaert 1783	
Subspecies, Variations, Synonyms: <i>Podiceps grisegena grisegena</i>	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: <b>A2b, C1</b>	<b>HELCOM Red List Category:</b>	<b>EN Endangered</b>
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: 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 Palearctic / 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 March 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 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

## SPECIES INFORMATION SHEET

*Podiceps grisegena* (wintering)

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.

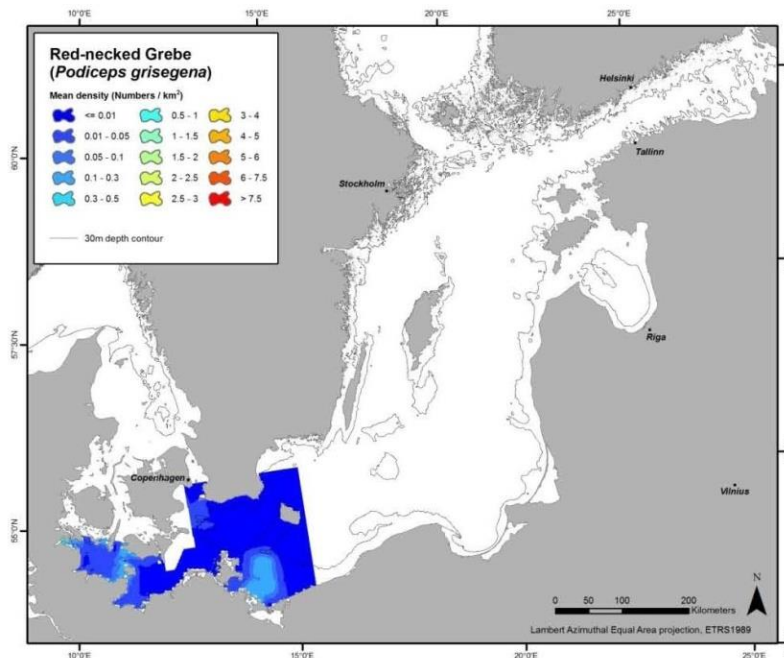


Fig. 3. Distribution and density of wintering red-necked grebes (*Podiceps grisegena*) in the Baltic Sea, 2007–2009. From Skov et al. (2011).

### 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 Zydulis et al. (2009), tens to hundreds of red-necked grebes are caught annually in gillnets in the Baltic

## SPECIES INFORMATION SHEET

## *Podiceps grisegena* (wintering)

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 gravelly 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: hallpösk-pütt, Finland: härkälintu, Germany: Rothalstaucher, Latvia: pelēkvaigu dūkuris, Lithuania: rudakaklis kragas, Poland: perkoz rdzawoszyi, Russia: Серощекая поганка, Sweden: gråhakedopping

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