

SPECIES INFORMATION SHEET

Phocoena phocoena

English name: Harbour porpoise	Scientific name: <i>Phocoena phocoena</i>	
Taxonomical group: Class: Mammalia Order: Cetartiodactyla Family: Phocoenidae	Species authority: (Linnaeus, 1758)	
Subspecies, Variations, Synonyms: <i>Phocoena communis</i> Lesson 1827, <i>Phocoena vomerina</i> Gill 1865, <i>Phocoena relicta</i> Abel 1905.	Generation length: 6 years	
Past and current threats (Habitats Directive article 17 code): Bycatch (F03.02.05), Contaminant pollution (H03)	Future threats (Habitats Directive article 17 codes): Bycatch (F03.02.05), Contaminant pollution (H03)	
Baltic Sea subpopulation		
IUCN Criteria: C1,2a(ii)	HELCOM Red List Category:	CR Critically endangered
Western Baltic subpopulation		
IUCN Criteria: A2a	HELCOM Red List Category:	VU Vulnerable
Global / European IUCN Red List Category: LC / VU	Habitats Directive: Annex II, IV	
Protection and Red List status in HELCOM countries: Protected year-round in all HELCOM countries.		
Denmark: VU, Estonia: DD, Finland: RE, Germany: 2 (Endangered), Latvia: –, Lithuania: –, Poland: LC, Russia: 4 (Uncertain status), Sweden: VU		

Distribution and status in the Baltic Sea region

Different studies indicate that there are two populations of harbour porpoises in the Baltic Sea area, one in the western Baltic Sea encompassing the Kattegat, the Belt Sea, the Sound and the German Baltic and a second one in the proper Baltic Sea (Huggenberger et al. 2002, Wiemann et al. 2010, Galatius et al. 2012). In the 19th and early 20th centuries harbour porpoises were widespread throughout the entire



Harbour porpoise Photo:Wikimedia

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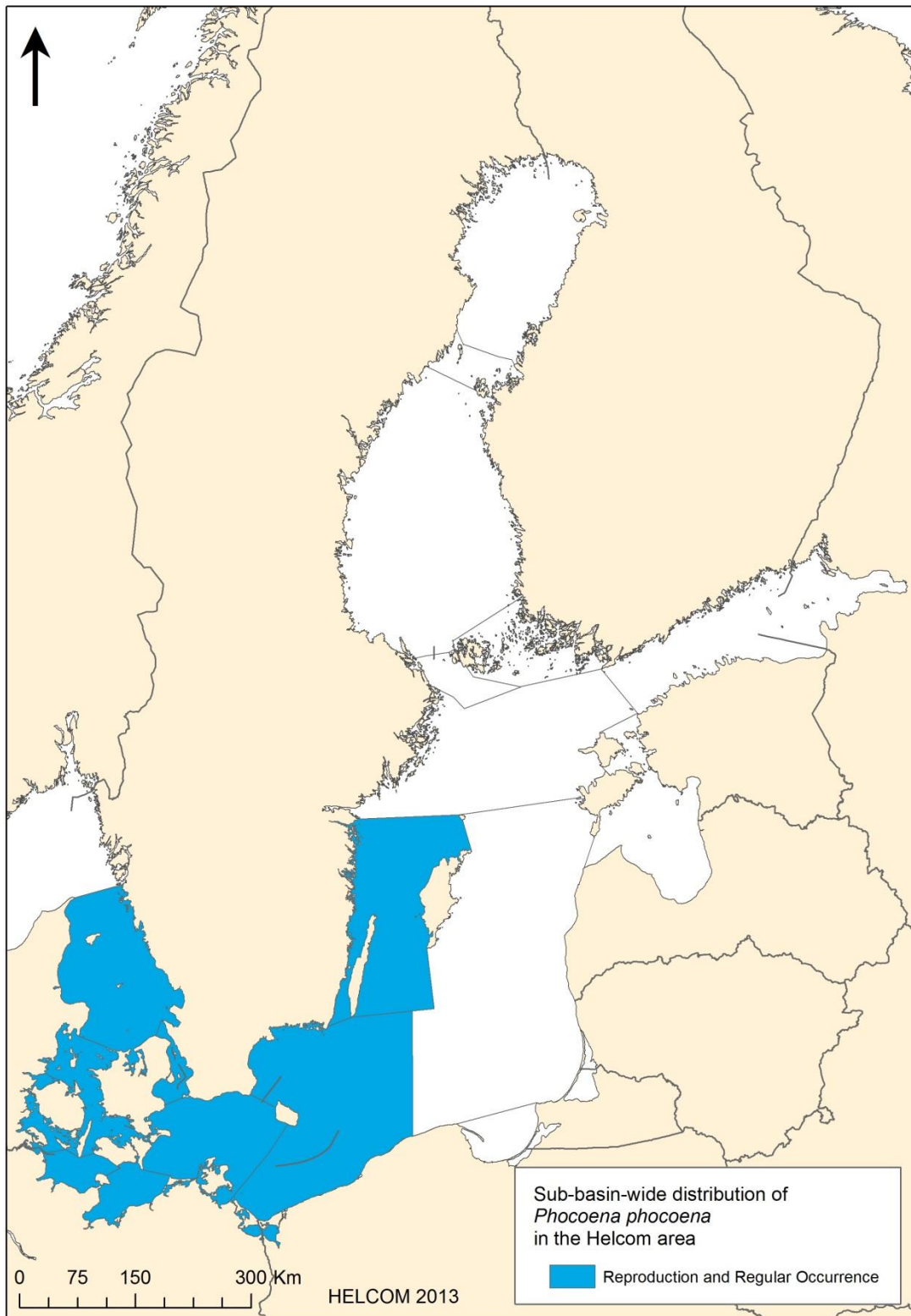
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Baltic, as far as the northeast part of the Gulf of Bothnia (Kemi) and the Gulf of Finland [1]. Today, harbour porpoise observations in the Baltic proper are very rare and it is estimated that the number of remaining individuals is at most few hundreds (Berggren et al. 2004). The two populations inhabiting the Baltic Sea differ significantly in genetic composition from that in the North Sea (Wiemann et al. 2010).

The harbour porpoise population in the Baltic proper has declined dramatically over the past 100 years and there are indications that this population is facing extinction (classified as Critically Endangered (CR C2a(ii)) under the IUCN Red List 2008). In the southern Baltic Proper, a mean abundance of 599 porpoise groups was estimated in June 1995 (Hiby & Lovell 1996, cited in Berggren et al. 2004). This survey was repeated in 2002 resulting in a mean estimate of 93 porpoise groups (Berggren et al. 2004). These survey results confirm the extremely low and probably decreasing population abundance in the Baltic Proper. Calculations based on a subset of the data from the SCANS surveys (SCANS II 2008) covering the distribution of the western Baltic population yield a drop in point estimates from 28 000 to 11 000 between 1994 and 2005 with 96% support for a decline in abundance from 1994 to 2005 (Teilmann et al. *in prep.*).

The Baltic Sea subpopulations of harbour porpoises are considered to be of Baltic-wide importance in the HELCOM area. In the EU marine area, harbour porpoises are under strict protection, because they are not only listed in Annex II, but also in Annex IV of the EU Habitats Directive. The species is also part of the "Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS)" under the Bonn Convention. ASCOBANS has specifically focused on the recovery of the proper Baltic Sea population with the enactment of the Jastarnia Plan (ASCOBANS 2009). The ASCOBANS conservation plan for the western Baltic Sea population has been developed and presented in 2012. Further, the Baltic Sea States have agreed in HELCOM Recommendation 17/2 to protect the harbour porpoise in the Baltic marine Area.

Distribution Map



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Habitat and Ecology

The harbour porpoise is one of the smallest cetacean species. It inhabits temperate and cold coastal and shelf waters throughout the northern hemisphere. In the Northeast Atlantic and Baltic Sea, adult males reach average lengths of 1.45 meters, while females average 1.60 meters. Age at sexual maturity is 3–4 years, after which females can potentially produce a calf each year (Lockyer 2003). Maximum recorded longevity is 24 years, but few porpoises live beyond 12 years (Lockyer 2003). Harbour porpoises primarily feed on fish, in the Baltic Sea mainly on cod, herring, sprat, gobies and eelpout (Aarefjord and Bjørge 1993, Santos and Pierce 2003, Malinga et al. 1996).

Description of major threats

Historically, there have been large catches of harbour porpoise in the Baltic region, with 2 000 individuals taken annually in Danish waters in the late 19th century and possibly larger catches in the Baltic proper (Kinze 1995). Porpoises are threatened by a variety of anthropogenic activities and impacts. Among these, bycatch in fisheries is of greatest concern (Berggren 1994, Vinther 1999, ASCOBANS 2000, Skóra & Kuklik 2003). Gillnets are thought to be responsible for most bycatches, but porpoises are also occasionally taken in trawls (Berggren 1994). The level of bycatch was estimated to be unsustainable in 2000 (ASCOBANS 2000). Pollution is of concern in the Baltic area, where reduced fertility of seals and population decline of seal species has been attributed to high levels of organochlorines such as DDT and PCBs (Helle et al. 1976, Bergmann 1999). Murphy et al. (2010) found indications for a link between higher organochlorine concentrations and lower pregnancy rates in harbour porpoises. Porpoises in the Baltic Sea have been reported to have up to 254% higher mean levels of PCBs than samples from Kattegat and Skagerrak (Berggren et al. 1999, Bruhn et al. 1999). In later years, levels of PCBs in Baltic biota have declined, so the negative impacts of pollution may be reduced in the future. Other threats in the Baltic Marine Area include acoustic disturbances, shipping and prey depletion due to over-fishing.

Assessment justification

Baltic Sea subpopulation. There is evidence that the harbour porpoises in the Baltic proper constitute a subpopulation (Huggenberger et al. 2002, Wiemann et al. 2010, Galatius et al. 2012), and for that reason they are assessed separately. The most recent information from 2002 on abundance of harbour porpoises indicated that there are only a few hundred porpoises left in the Baltic proper (Berggren et al. 2004). Furthermore, it is assumed, based on reported bycatches, that the number may have declined even further, and the population may be facing extinction. The number of mature individuals is estimated to be less than 250 and a continuing decline of at least 25% within one generation is assumed, which means that the population is categorized as Critically Endangered (CR) according to criterion C1. The same category is reached also according to C2a(ii), i.e. the small size of the population is combined with a continuing decline in numbers of mature individuals and at least 90% of mature individuals is in one subpopulation.

Western Baltic (Belt Sea) subpopulation. The harbour porpoises in the western Baltic (or Belt Sea) are also assumed to constitute a separate subpopulation (Wiemann et al. 2010, Galatius et al. 2012), and for this reason they are assessed separately. The most recent information on abundance of harbour porpoises in the western Baltic Sea showed a reduction of point estimates from 28 000 in 1994 to 11 000 in 2005 (calculations based on a subset of data from the SCANS surveys (SCANS II 2008)) (Teilmann et al. in prep). 95% confidence intervals from 1994 (11 946–64 549) and 2005 (5 840–20 214) overlap, but a Bayesian analysis of the data yielded 96% support for a decline. It is assumed that the population reduction has exceeded 30% over the last three generations, and the subpopulation is categorized as Vulnerable (VU) according to criterion A2a.

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Recommendations for actions to conserve the species

National conservation and management plans should be developed in order to ensure conservation of the populations. These should include continuation of long-term monitoring and research programs, the restoration of suitable habitats where appropriate, as well as the establishment and proper management of marine protected areas. Further, the responsible national authorities should coordinate their conservation and monitoring strategies with neighbouring countries. Immediate action to reduce bycatches is needed.

Common names

Denmark: marsvin, Estonia: harilik pringel, Finland: pyöriäinen, Germany: Schweinswal, Kleintümmeler, Latvia: cūkdelfīni (?), Lithuania: paprastoji jūrø kiauľė, Poland: moršwin, Russia: морская свинья (Morskaja svin'ja), Sweden: (vanlig) tumlare.

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[1] <http://www.ascobans.org/index0201.html>

[2] EU:regulation 812/2004GRATIS 812/2004 states: "Member States shall design and implement monitoring schemes for incidental catches of cetaceans using observers on board the vessels flying their flag and with an overall length of 15 m or over, for the fisheries and under the conditions defined in Annex III."

