

SPECIES INFORMATION SHEET

Phoca vitulina vitulina

English name: Harbour seal / Common seal		Scientific name: <i>Phoca vitulina vitulina</i>	
Taxonomical group: Class: Mammalia Order: Carnivora Family: Phocidae		Species authority: (Linnaeus, 1758)	
Subspecies, Variations, Synonyms: –		Generation length: 15	
Past and current threats (Habitats Directive article 17 codes): Hunting (F03.01), Bycatch (F03.02.05), Contaminant pollution (H03), Epidemics (K04.03), Other threat factors (loss of genetic diversity; –)		Future threats (Habitats Directive article 17 codes): Bycatch (F03.02.05), Contaminant pollution (H03), Other threat factors (loss of genetic diversity; –)	
Kalmarsund subpopulation			
IUCN Criteria: D1	HELCOM Red List Category:	VU Vulnerable	
Southern Baltic subpopulation			
IUCN Criteria: –	HELCOM Red List Category:	LC Least Concern	
Global / European IUCN Red List Category LC/LC (species level)	Habitats Directive: Annex II, V		
<p>Protection and Red List status in HELCOM countries:</p> <p>In EU waters, this species is protected by the Habitats Directive and listed in its Annexes II and V, subject of special conservation measures also in Russia (Red Data Book of the Russian Federation).</p> <p>Protection in HELCOM countries:</p> <p>Denmark: The species has been protected since 1977. However, licenses are given to shoot a limited number of individuals each year, when seals interfere with fishing gear. Regulation is not allowed between 1st June and 31st July, and never in seal reserves.</p> <p>Estonia: –</p> <p>Finland: –</p> <p>Germany: All hunting of seals is forbidden in Germany.</p> <p>Latvia: –</p> <p>Lithuania: –</p> <p>Poland: The species is under strictly protection in Poland. Disturbing, catching or killing are forbidden.</p> <p>Russia: Since 1970s hunting on seals in the Russian part of the Baltic Sea is fully prohibited.</p> <p>Sweden: According to the Hunting Act 3§, it is forbidden to capture or kill the species unless it is allowed in other parts of the hunting legislation.</p> <p>Red List status (on species level) in HELCOM countries: Denmark: LC, Estonia: –, Finland: –, Germany:* (Not threatened), Latvia: –, Lithuania: –, Poland: –, Russia: 1 (threatened by extinction), Sweden: VU</p>			

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Distribution and status in the Baltic Sea region

With a population of about 15 000 in 2007 (Härkönen et al. 2008), common seals are very abundant in the Skagerrak, Kattegat and the Belt Sea area, whereas further east (east of 13° E) they are restricted to only three small breeding colonies with the Kalmarsund as their easternmost breeding area. According to Schwarz et al. (2003) and Harder (2011), historically, harbour seal breeding sites as well as haul-out sites could be found along the German coast, thus, we conclude that the harbour seal population size



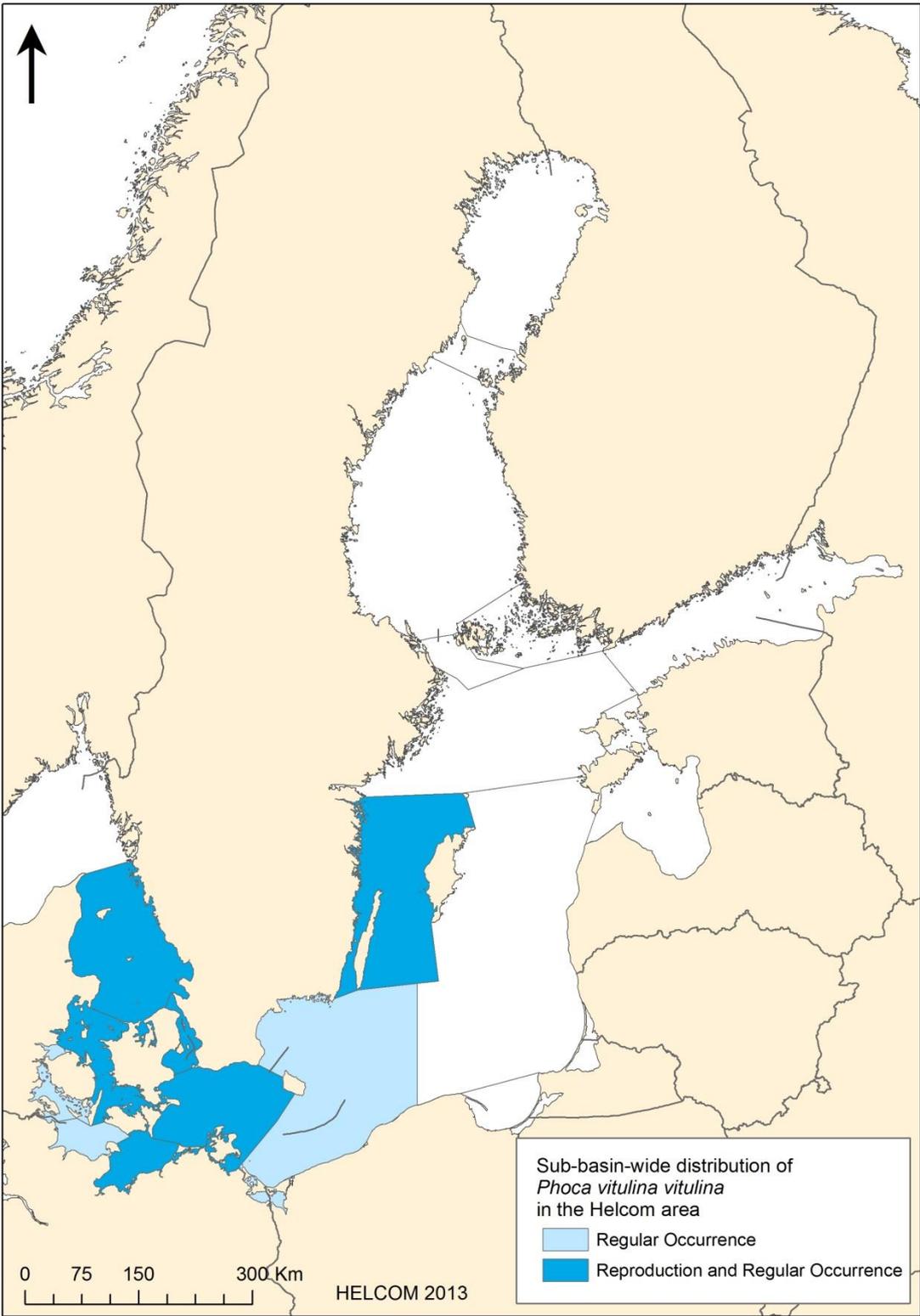
Harbour Seal. Photo by **Andreas Trepte**, www.photo-natur.de.

and structure within the southern Baltic Sea are still far away from historic abundance and distribution. In consequence, for the Baltic Sea, harbour seals are listed as Critically Endangered in the German red list (1996). The Kalmarsund population differs genetically from the current Skagerrak/Kattegat and Southwest Baltic common seal populations (Stanely et al. 1996) and is therefore assessed separately.

The Baltic Sea area populations of the common seal are considered to be of sub-regional importance in the HELCOM area. In EU waters, this species is protected by the Habitats Directive and listed in its Annexes II and V.

In the beginning of the 20th century, the population in the Skagerrak, Kattegat and the Danish Straits exceeded 17 000 but declined to some 2500 in the 1930s as a consequence of hunting (Heide-Jørgensen & Härkönen 1988). In times from the 19th to the 20th century the population in the western Baltic Proper was about 5000 compared to ca. 1000 in 2007 (Karlsson et al. 2008). The Skagerrak/Kattegat population has been hit by three mass mortalities. The two first, in 1988 and 2002 were caused by PDV virus and killed half the population on both occasions. The third epidemic in 2007 killed some 3000 seals and was caused by an unknown pathogen. The recovery rate in the Kattegat has been low ever since the 2002 epidemic^[2].

Distribution map



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Habitat and ecology

Common seals occur in all moderately temperate seas of the northern hemisphere. They grow to an average length of 1.4–1.7 metres and a mass of up to 100 kilograms, and they can reach a maximum age of 36 years (Härkönen & Heide-Jørgensen 1990). Generally the species is gregarious, hauling out in small to large scattered groups to breed, moult and rest. Some colonies in protected bays and estuaries can number over 1 000 individuals [1]. Females become sexually mature between 3 and 6 years and they then normally generate one pup every year. The pups are usually born on sheltered beaches, rocks or littoral sandbanks, from where they can follow the mother into the water immediately after birth. Common seals feed on a great number of fish species (Härkönen 1987 a, b, 1988). They tend to stay within 25 km from shore but individuals are occasionally found 100 km or more offshore.

The long-term isolation of the Kalmarsund population has led to substantial loss of genetic diversity and in the occurrence of alleles only present in this population.

Description of major threats

The common seal populations were severely depleted by hunting, by-catch in fisheries, and later by diseases related to effects of pollution and the PDV virus. Other threats include habitat loss due to coastal development. A low rate of population increase in the Kattegat area, compared to the Skagerrak prior to the 2002 epizootic, may be an indication of reduced reproductive capacity (ICES 2005).

Assessment justification

Kalmarsund subpopulation. The Kalmarsund population of the harbour seal differs genetically from the current Skagerrak/Kattegat and Southwest Baltic common seal populations (Stanely et al. 1996) and is for that reason assessed separately. The population has suffered a dramatic decline in numbers to less than 200 seals in the 1970s but has been slowly increasing more recently. In the 2010 Swedish national assessment the number of mature individuals was estimated to 425. The area of occupancy is also very restricted, estimated to be less than 20 km² and the number of locations is low (less than 5). The species is categorized as Vulnerable (VU) according to criterion D1.

Southern Baltic subpopulation. In the beginning of the 20th century the population in the Skagerrak, Kattegat and the Danish Straits exceeded 17 000 but declined to some 2 500 in the 1930s as a consequence of hunting (Heide-Jørgensen & Härkönen 1988). In times from the 19th to the 20th century the population in the western Baltic Proper was about 5 000 compared to ca. 1 000 in 2007 (Karlsson et al. 2008). The Skagerrak/Kattegat population has been hit by three mass mortalities. The two first, in 1988 and 2002 were caused by PDV virus and killed half the population on both occasions. The third epidemic in 2007 killed some 3 000 seals was caused by an unknown pathogen. The recovery rate in the Kattegat is low ever since the 2002 epidemic. Despite the past declines and even recent mass mortalities the overall decline in three generations (c. 45 years) does not exceed the thresholds given in the A criterion, and the current population is so large that it does not meet any of the other criteria either. Consequently the population is categorized as Least Concern (LC).

Recommendations for actions to conserve the species

National seal 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 seal sanctuaries. Further, the responsible national authorities should coordinate their conservation and monitoring strategies regarding shared seal populations with neighbouring countries.

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Common names

Denmark:-, Estonia:-, Finland: kirjohylje, Germany:-, Latvia:-, Lithuania:-, Poland:-, Russia:-, Sweden: knubbsäl

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- [1] <http://www.pinnipeds.org/species/harbour.htm>
- [2] Interestingly, the distinct Kalmarsund population was not affected by the PDV virus epidemics in 1988 and 2002.