

The Baltic Harbour Porpoise

NEEDS PROTECTION!





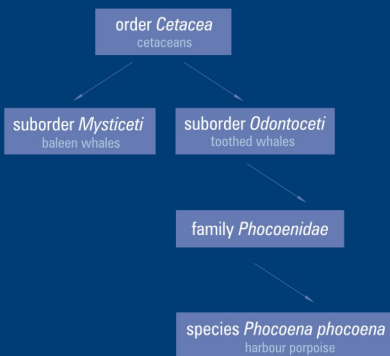
Harbour porpoises

are regarded today as the most mysterious animals of the Baltic Sea. They have always been here, although nowadays we see them extremely rarely. The total Baltic population numbers as few as 600 porpoises. Not everyone associates their name with their appearance. Even fishermen happen to mistake one of those cetaceans for a large fish such as a tuna or a shark.



How to spot a harbour porpoise?

For a porpoise-spotting expedition to be successful, the weather must be nice, the sea has to be calm, and the water surface ideally smooth. Only by watching the sea surface without any break you may spot a porpoise emerging out of the water. Although the porpoises are usually solitary, we will occasionally see a small group or a female with her young. We can only spot a porpoise when its short, triangular, black dorsal fin emerges. After the animal has taken in some fresh air, it disappears beneath the surface within a second to usually emerge again after a while, if not foraging, when it remains submerged for longer. Sometimes a porpoise may be seen leaping out of the water.

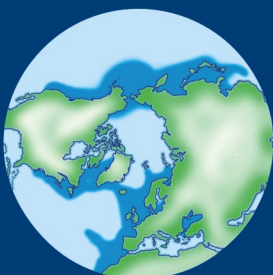


Taxonomy and distinctive characteristics

The harbour porpoise [*Phocoena phocoena* (Linné, 1758)] is a marine mammal representing the order *Cetacea* (cetaceans); together with the sperm whale, the killer whale, and dolphins it belongs to the suborder *Odontoceti* (toothed whales). The six porpoise species make up the family *Phocoenidae*. With their body length not exceeding 2 m they are smaller than dolphins. They have no beak and most show a short, triangular dorsal fin and spade-shaped teeth. Harbour porpoises are generally dark grey on the back and off-white on the belly. The sides are coloured various shades of grey. The flipper is small and dark.

Geographical distribution

The harbour porpoise occurs exclusively in coastal areas in the northern hemisphere where the water is temperate to cool. Isolated populations are found off the Atlantic coast of North America, off the European shores in the North Sea as well as the Baltic and the Black Seas. In the Baltic Sea individuals appear regularly off the coast of Denmark and Germany, while they are rare in other regions.



Species range of *Phocoena phocoena*
(dark blue)

Behaviour

Harbour porpoises tend to inhabit shallow coastal waters as well as bays and estuaries; they may even enter rivers and canals. They usually live alone or stay in small groups of few individuals. They lead a very private life, keeping away from boats and ships, and only occasionally leaping out of the water. A harbour porpoise may sometimes be seen lying at the surface for a while between the dives.



Status of the Baltic population

The harbour porpoise is a protected species world-wide. Although the harbour porpoises were abundant in the Baltic as late as in the middle of 20. century, the population is now greatly reduced. The genetically isolated Baltic population features as Vulnerable on the Red List of the International Union for Conservation of Nature (IUCN), which means that it is facing a high risk of extinction in its natural habitat in the medium term future.

Compared to the situation in the early 1900s, when as many as several hundred porpoises happened to be by-caught in a year, the Baltic population has become drastically diminished. The main historical factor responsible for the reduction of the harbour porpoise population in the Baltic Sea was the mass hunting. The porpoises were regularly hunted for meat and fat from the 14th century until 19th century, when porpoise hunters belonging to guilds were still numerous. The porpoise hunts took place mostly in the Danish straits where the animals could be easily trapped. The extensive ice cover of the Baltic in winter has also contributed to a significant harbour porpoise mortality. During severe winters the animals could be entrapped and suffocated, particularly in those areas which are ice-free during normal winters. The high mortality was recorded, for example, in the winters 1928/29, 1939/40 or 1946/47, when almost the entire Baltic Sea was covered with ice.



The harbour porpoise hunting in the Danish straits in XIX century



Average ice cover during winters in the Baltic Sea

[Omstedt, A. and Nyberg, L. (1996). Response of Baltic Sea ice to seasonal, inter-annual forcing and to climate change. Tellus, 48 A, No. 5, 644-662]

Average ice extent during:

-  Mild winters
-  Normal winters
-  Severe winters
-  Ice-free area



The map shows distribution of occasional reports on by-catches and observations of harbour porpoises in the Baltic Sea in 1980 - 2005. (For the purpose of data integrity, both sightings of live specimens and dead stranded animals were included into "sighting" category).

Abundance

Waters around the globe support several populations of the harbour porpoise, geographically or genetically isolated from each other. However, there are no data on how numerous the harbour populations are in most areas they occur. The only successful estimates of the Baltic population size, made off southern Sweden and Germany in 1995, suggest some 600 harbour porpoises to be present there. Several subsequent expeditions organised in the Baltic failed to produce the desired estimates: the standard estimation methods proved unsuitable when applied to such a depleted population.



Identification

| | |
|-----------------|--|
| Length | Females up to 1,70 m; males up to 1,50 m; newborn about 70 - 90 cm |
| Weight | Approximately 50 kg |
| Lifespan | On average between 10 - 17 years |
| Sexual maturity | Females after 5 years; males 6 years |
| Offspring | One calf every 1 - 2 years |

 **Finland**
 ▲ Bycatch - ?
 ● Sighting - 18

 **Sweden**
 ▲ Bycatch - 41
 ● Sighting - 27

 **Estonia**
 ▲ Bycatch - 3
 ● Sighting - 0

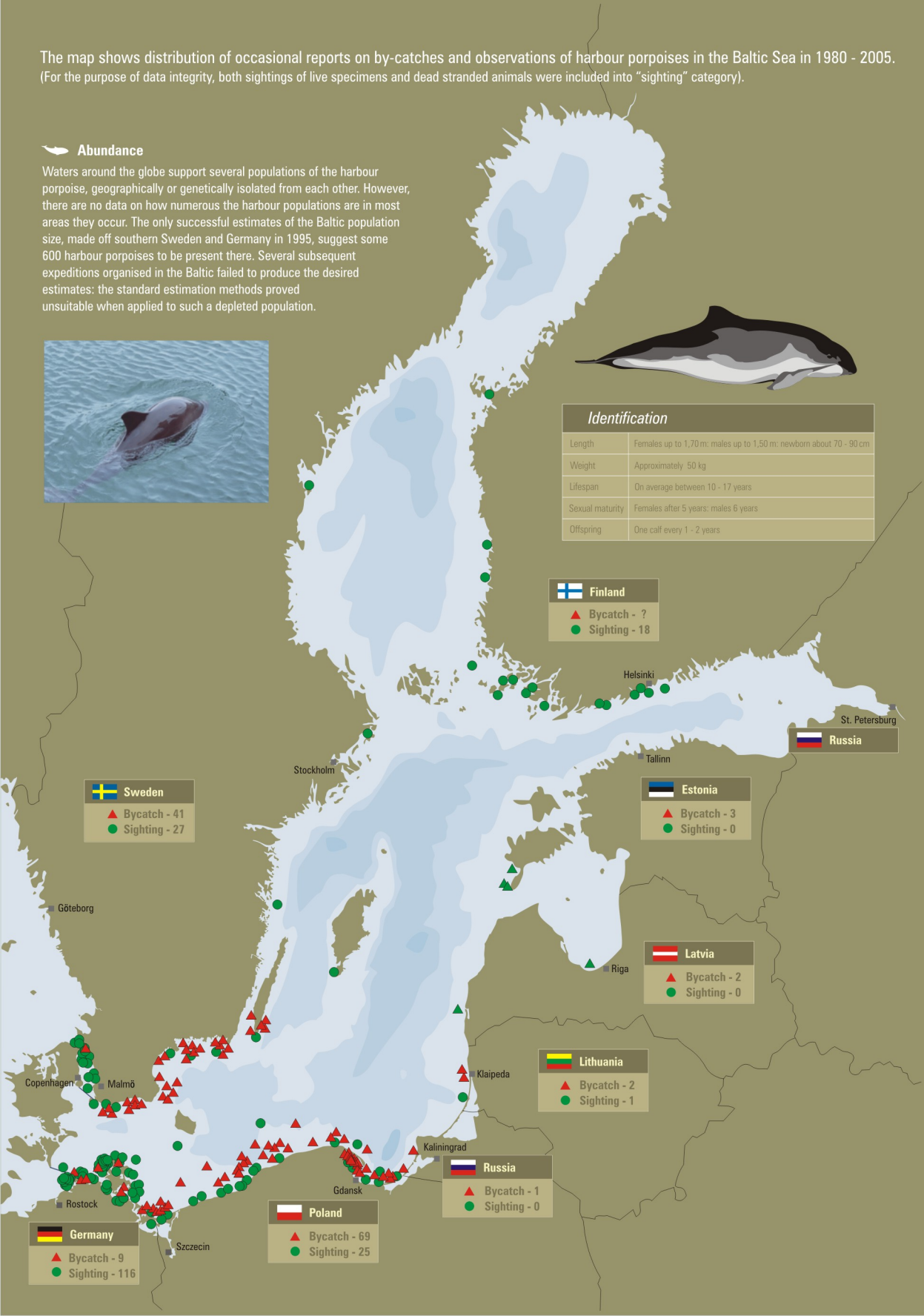
 **Latvia**
 ▲ Bycatch - 2
 ● Sighting - 0

 **Lithuania**
 ▲ Bycatch - 2
 ● Sighting - 1

 **Russia**
 ▲ Bycatch - 1
 ● Sighting - 0

 **Poland**
 ▲ Bycatch - 69
 ● Sighting - 25

 **Germany**
 ▲ Bycatch - 9
 ● Sighting - 116





At present the Baltic population of harbour porpoise is regarded as threatened with extinction!

One of the main protective recommendations is to reduce the harbour porpoise mortality caused by human activities. Survival of every individual is crucial for the population as it guarantees the ability of successful reproduction. And yet, the porpoises still die unnecessarily, mainly because of coming in contact with fishing nets. Many years ago (for example in 1920-1940 off the Polish coast and in 1960-1970 off the coast of Sweden), the harbour porpoises were far more numerous in the Baltic than they are today. Large number of animals reported bycaught in Swedish fishery in years 1960-1969 got entangled in the salmon driftnets. The diminished today's population faces a mortal danger posed by different types of set gillnets used by the coastal fishery.



The gillnets, made of a very thin but strong yarn, form invisible walls hard to avoid by the harbour porpoises as well as other marine mammals or birds. On hitting such a wall, an animal becomes entangled and has no chance to break free. Gillnets are particularly dangerous; their meshes are so large as to trap the porpoise by the snout, without any possibility for the animal to disentangle itself. Desperate attempts to escape from the trap result only in more layers of the net twisting round the animal's body. Experiencing enormous stress, the mammal exerts itself more than usual, which quickly leads to oxygen deficit and death. The nets of this type are used mainly for catching the salmon, cod, or flatfish.

Number of porpoises reported by the Baltic countries in 1950 - 2005 (the number of by-catches in the given period - in orange)

* one specimen in driftnet every year, ** one possible by-catch

| years | Sweden | Germany | Poland | Russia | Lithuania | Latvia | Estonia | Finland |
|--------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|---------------|---------------|
| 1950-1959 | ?? | 7 / 2 | 8 / 5 | ?? | ?? | ?? | 5 / ? | ?? |
| 1960-1969 | 50 / 50 | 14 / ?* | 8 / 2 | ?? | ?? | 1 / 1 | 6 / ? | 25 / ? |
| 1970-1979 | 7 / 6 | 13 / 2 | 6 / 3 | ?? | ?? | 1 / 1 | | 10 / 6 |
| 1980-1989 | 35 / 27 | 36 / 2 | 7 / 6 | 1 / 1 | 1 / 0 | ?? | 3 / 3 | 1 / ? |
| 1990-1999 | 17 / 14 | 49 / 2 | 62 / 45 | ?? | ?? | 1 / 1 | | ?? |
| 2000-2005 | 16 / 0 | 40 / 5** | 25 / 18 | ?? | 2 / 2 | 1 / 1 | ?? | 17 / 0 |
| total | 125 / 97 | 159 / 13 | 116 / 79 | 1 / 1 | 3 / 2 | 4 / 4 | 14 / ? | 53 / ? |

Conservation status



The harbour porpoise, a cetacean species living close to the humans, is one of the most endangered species among the European marine mammals and has been granted legal protection throughout its entire range. As pointed out by the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora Annexes II and IV, the major European regulation on animal species protection, the harbour porpoise requires strict conservation and its habitats require protection. The harbour porpoise is also protected by the Bern Convention (the Convention on the Conservation of European Wildlife and Natural Habitats), a Council of Europe Act, in which it is listed in Annex II.

Moreover, the Bonn Convention (the Convention on the Conservation of Migratory Species) Annex II refers to the harbour porpoise as a species requiring conservation based on a special international agreement. The Baltic Sea and the North Sea countries have signed the Bonn Convention and Agreement on the Conservation of the Small Cetaceans of the Baltic and North Seas (ASCOBANS). The Helsinki Commission (HELCOM), the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, adopted a special recommendation "Protection of Harbour Porpoise in the Baltic Sea Area" (No. 17/2) in 1996. Although the harbour porpoise has been protected by a number of legal acts for years, the Baltic population shows no signs of improvement.

ASCOBANS Recovery Plan for the Baltic population

Under ASCOBANS agreement, a plan for restoring the Baltic harbour porpoise population (the so-called Jastarnia Plan) has been developed. It recommends that the signatories play an active role in protecting the species by, for example, designating areas of special significance for the species' survival; identifying the dangers; protecting the habitats through banning discharges of substances harmful for the porpoise; limiting the harbour porpoise mortality in fishing nets through modifications of fishing equipment and techniques as well as through the use of acoustic deterrents (pingers); conducting scientific research on the population status; preventing acoustic disturbance; and disseminating information on the harbour porpoise among the public so that a general appreciation of and support for protection of the porpoise becomes widespread. It is also important to continue the ongoing monitoring of the state of the population and its environment, and also to be able to provide medical treatment to and rehabilitation of those individuals that need them. According to this plan, all the regional conservation activities should be based on cooperation of scientists, governments, environmental NGOs, fishermen, and public opinion representatives under the assumption that all those stakeholders understand the nature of the problem and are willing to seek practical measures for reduction of the existing threats to the species.



 **ASCOBANS**



Applied EU conservation measures

The EU fisheries policy, acting according to the principle of sustainable development, gives increased emphasis to fishing methods that ensure protection of natural resources. The problem of protecting marine mammals from being accidentally by-caught has been reflected in the most recent legal regulations regarding fisheries policies. It is assumed that within the next few years the Baltic countries should cease to use driftnets in salmon fishery, introduce independent observers on a certain number of fishing boats, and require that acoustic deterrents be used in some fisheries.

CCB proposals on actions regarding protection of the harbour porpoise

1. Reinforcing the observers programme with a number of monitored vessels and undisputable research techniques, such as video recording, in order to obtain reliable and credible data.
2. Developing a monitoring method for harbour porpoise by-catch in coastal fisheries (by fishing vessels smaller than 12 m) and applying it as soon as possible.
3. Coupling the porpoise by-catch monitoring programme with recording by-catches of seal, seabirds, and protected fish species (for example the sea lamprey, sturgeon, twaite shad, and allis shad).
4. Implementing the EU ban on driftnets in the Baltic Sea as of 1 January 2008: a successful recovery of the Baltic harbour porpoise population cannot be achieved with driftnet fisheries still in operation.
5. Acting to reduce by-catches of harbour porpoises with other types of fishing gear, including time and space restrictions on the use of those nets most harmful for the species (for example set gillnets).

What can you do for the harbour porpoise?

If you see a harbour porpoise or find one on the beach, report this to the nearest harbour or environmental administration unit or send the information directly to the national Web database, if available. The most likely situation is for you to find a dead porpoise on the beach. Such an animal would have been caught in a fishing net and tossed back into the sea. The drifting animal body is brought by the sea to the shore, where it starts rotting.

If you do come across a live porpoise stranded on the shore, you should offer it the first aid. Remember not to toss the porpoise back into the water! If the animal has been found on the beach, there must be a reason for it: orientation dysfunction, mechanical body damage or other medical condition. Porpoises should not be pulled along the sand. Their skin is far more delicate than that of humans, so pulling would cause an immediate injury. Porpoises are not aggressive and do not bite. They show trust in people who wish to help them. You can, and should, act without hesitation.

1. Check if the porpoise's respiratory system has not been impaired. Gently remove sand from its blowhole located on the upper surface of the head.
2. It is necessary to constantly pour water over the porpoise's body (but without flooding the blowhole!) or to cover it entirely (leaving the nasal orifice uncovered) with a wet towel or other piece of cloth to protect it against drying.
3. The sick animal should not be disturbed: it is necessary to ward off other people, dogs and seagulls. It is useful to dig a small pool in the sand on the beach and to position the sick animal gently in it. Porpoises thrown onto the beach by waves may be picked up and gently put down in a specially prepared place. This must be done slowly, with extreme care.
4. Inform the nearest marine administration unit (harbour authority, maritime office), the nearest yacht club or the life guards, or environmental organisations.
5. Send in your info on the stranded harbour porpoise to the national coordinating body, if available.



Coalition Clean Baltic (CCB) was established in 1990 in Helsinki when non-governmental environmental organisations from nine countries of the Baltic Sea region became united to cooperate in activities aimed at the protection of the Baltic Sea environment. Currently CCB unites 25 member organisations.

CCB activities are focused on three areas:

- :: Protection of waters in the Baltic Sea region.
- :: Prevention of uncontrolled development of investments harmful for the Baltic environment.
- :: Development of sustainable fisheries in the Baltic Sea.

The Green Federation GAJA was established in 1993; it is a member of the Coalition Clean Baltic and the Polish Green Network. The Green Federation GAJA is involved in wide-scale, special activities aimed at active environment protection, conservation of the Baltic Sea, and restoration of species.

These actions strive to assist in the fulfilment of the tasks set forth in the Convention on Biological Diversity, adopted at the Earth Summit in Rio de Janeiro, in the Bern Convention on the Conservation of European Wildlife and Natural Habitats, and in the EU Habitat Directive. The Green Federation GAJA is the leading organisation in CCB activities concerning the development of sustainable fisheries.

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Coalition Clean Baltic
FOR PROTECTION OF THE BALTIC SEA ENVIRONMENT

Coalition Clean Baltic
Östra Agatan 53
SE-753 22 Uppsala, Sweden
www.ccb.se



Green Federation GAJA
ul. 5 Lipca 45
70-374 Szczecin, Poland
www.gajonet.pl

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