

**Agenda Item 4.3.1: ASCOBANS Baltic Harbour Porpoise Recovery Plan
“Jastarnia Plan” - Implementation**

Baltic Sea Porpoise Database

Submitted by: Germany



NOTE:
**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING
THEIR OWN COPIES OF THESE DOCUMENTS TO THE MEETING**

BALTIC SEA PORPOISE DATABASE

Ulrika Westerberg¹, Ida Carlén², Iwona Kuklik³,
Valdis Pilats⁴, Meike Scheidat¹, Ursula Siebert¹

¹ Forschungs- und Technologiezentrum Westküste, Hafentörn 1, D-25761 Büsum, Germany

² Swedish Museum of Natural History, S-104 05 Stockholm, Sweden

³ Hel Marine Station, University of Gdansk, 84-150 Hel, Polen

⁴ Gauja National Park Administration, Baznicas iela 3, LV-2150, Sigulda, Latvia

Contact author: westerberg@ftz-west.uni-kiel.de

ABSTRACT

Different investigations have shown that there is a distinguished subpopulation of harbour porpoises in the Baltic Proper. Due to a low number of harbour porpoises in this area there have been difficulties in determining the status of the population. It has also been difficult to quantify the population size by ship- and aerial surveys using the standard transect-line method. The amount of information on the occurrence of harbour porpoises is very low in each country surrounding the Baltic Proper. Therefore only combined international effort allows to complete the picture for better protection and management of this endangered species.

In the frame of the project “Assesment and Management-oriented Characterisation of Harbour Porpoises from the Baltic Sea and Investigations on Reproductivity, Age Distribution and State of Health” funded by the Federal Agency of Nature conservation (Bundesamt für Naturschutz) in Germany, a database for all available information is created. This will include all information on effort- and incidental sightings, strandings and bycatches (both recent and historical) from all around the Central and Eastern Baltic Sea (South of 56°N, East of 12°E). Furthermore information on acoustic monitoring of porpoises with towed or stationary hydrophones will be included. The data will be presented by an interactive map on the internet, which will be located at www.balticseaporpoise.org. This database will then act as a forum and the data will be accessible for all researchers around the Baltic Sea. The website can be accessed by professionals as well as the general public and the database will therefore also serve as an educational tool. Additional information regarding the project will also be found at this website, as well as contact details for all parties who have included data. Since the project was started in autumn 2004, Latvia, Germany, Poland and Sweden have included data, but more countries have showed definite interest. By presenting this project it is hoped that all countries around the Baltic Sea will be interested in being a part of this cooperation.

BACKGROUND

The number of harbour porpoises in the Central and Eastern Baltic Sea (Baltic Proper including Bight of Riga and Gulf of Finland) have decreased to the extent that they are now classified as “endangered”. This decline is probably mainly due to bycatches, but could also be a result of ice winters, direct hunts, food availability, habitat degradation and pollution (Berggren, 1994, Schulze 1996). There have been studies indicating that the porpoises in the Baltic Proper exist as a separate subpopulation, being different from the subpopulations in the Western Baltic, Kattegat, Skagerrak and the North Sea (Tiedemann *et al.*, 1996, Huggenberger *et al.*, 2002). This is an important aspect when considering management and conservation measures. Unfortunately, at this stage the Baltic Proper population is believed to include less than 600 animals (Hiby & Lovell, 1996, Berggren *et al.* 2003), and has reached such a threshold where normal surveys such as aerial and ship surveys have proved to be difficult in order to establish the population abundance and distribution. For example during 2001 and 2002 a ship survey was conducted in the south-western Baltic Sea and only three acoustic detections were made and no visual sightings on the 2946 km surveyed trackline (Gillespie *et al.*, 2003). In this paper an additional approach to receive an overview of the population status of harbour porpoises in the Central and Western Baltic Sea is presented.

The idea is to create a database which will include sightings-, strandings- and bycatch data of harbour porpoises, both recent and historical, from all surrounding countries of the Baltic Sea. This data will then be presented on the internet through an interactive map. This idea was presented on the 2004 ECS conference in Kolmarden, Sweden, and has become part of the Jastarnia project (Investigations on Harbour Porpoises in the Baltic Sea as Basis for the Implementation of the Population Recovery Plan for Harbour Porpoises in the Baltic Sea (Jastarnia Plan), FKZ: 804 86 011 - K1), funded by the Federal Agency of Nature conservation (Bundesamt für Naturschutz) in Germany.

The aim of this database is also to develop a forum and network for researchers in all the states around the Baltic Sea, allowing sharing and accessing data, hence making cooperation an easier task, but also to serve as an educational tool for the general public.

DATABASE STRUCTURE

The project was started in autumn 2004. Therefore a preliminary status of the database is presented in this working paper. The programme used for this database is Microsoft Access. The structure is based on four tables, “Incidental sightings”, “Effort sightings”, “Strandings” and “Bycatches” (Fig.1). In future historical data will be included as a fifth block. Effort sightings refer to dedicated surveys, such as aerial- and ship surveys.

Each data record has a database code which identifies the datasource, as to simplify contact possibilities in case of queries regarding the different sightings. The contact details will then be available on the website where the map will be located.

Since we would like to put the focus on the Central and Eastern Baltic Sea, we have set the western borders to 12°E and 56°N, and will only include data East and South of these borders (Fig.2). The latitude and longitude for each position has been given in decimal degrees as to

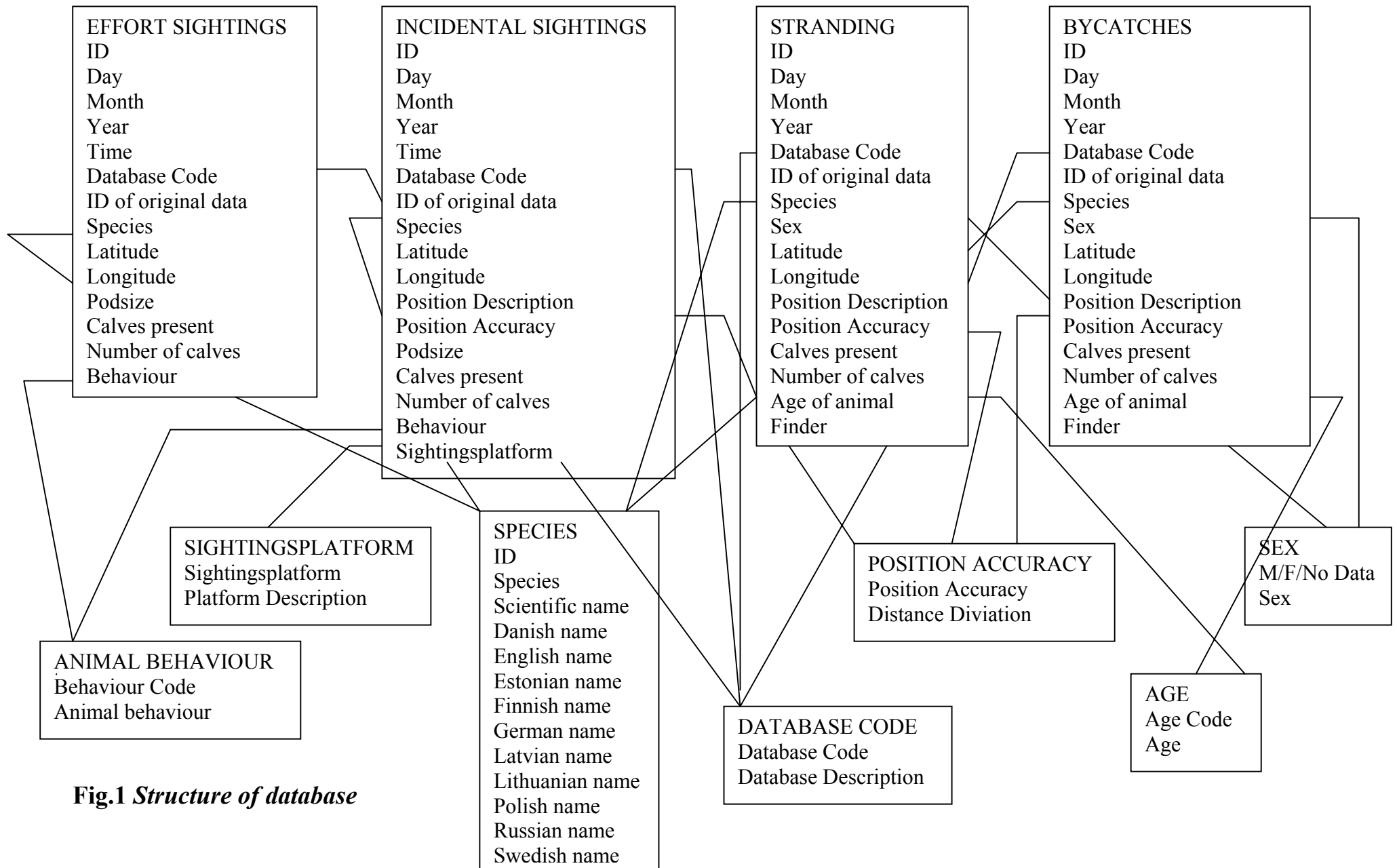


Fig.1 *Structure of database*

be able to plot them easily on a map. For the effort sightings all sightings have been given with an exact position with help of a GPS. For the other categories, positions have been more or less accurate (some have just had a general area) and have therefore first received a position with regard to the description of the place/location where the sighting was made, and thereafter a “Position Accuracy”.

INTERNET PRESENTATION

Below you can see a map of the area in which we will include data. The western border will be 12°E, and the northern border on the West Coast of Sweden will be 56°N.



Figure 2. *Map of Baltic Sea with borders, within which data will be presented.*

All sightings/strandings/bycatches are plotted on the map using the program ArcGIS. On the map you can choose to see the four different categories one at a time or all together. You can also see what sightings have calves present.

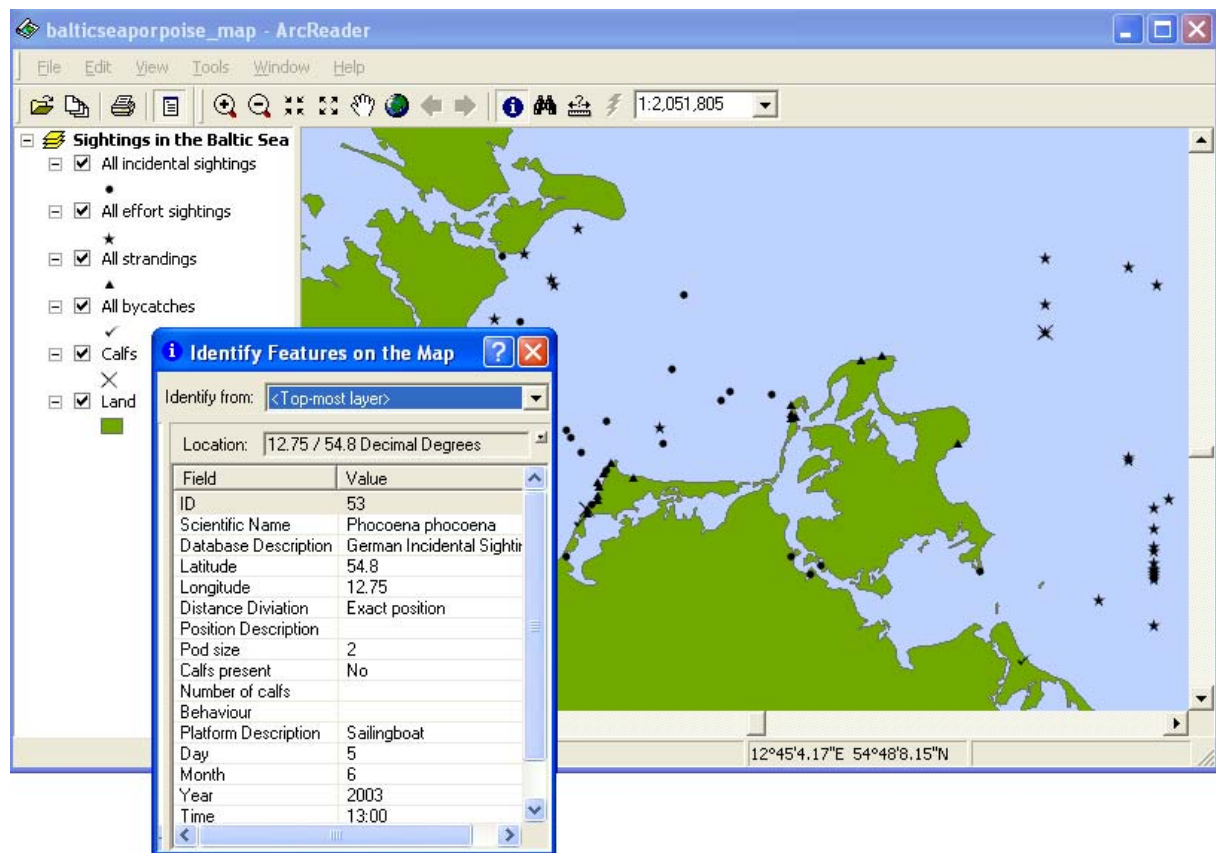


Figure 3. A small area on the Baltic Sea map, including incidental- and effort sightings, strandings and bycatches.

The map will be presented on the Internet at www.balticseaporpoise.org. On this website additional information will also be available about the project, as well as links to associated agencies and organisations, contact details for everybody who has provided data, etc. To view this map you will need ArcView Reader. This is a free programme and on the website a link will be provided to a site where the program can be downloaded.

FUTURE WORK

It is important to keep in mind that this project is in a developing stage and will change as more information is added. As mentioned earlier historical data, especially on catches of harbour porpoises, will also be included. Furthermore all available information on stranded and bycaught animals such as genetic and age structure, reproductive status, food consumption, pathological findings will be added, as well as acoustic information from PODs (porpoise detectors) and towed hydrophone arrays. The database will also be combined with databases on biotic and abiotic factors.

At the time of making this working paper, Germany, Sweden, Latvia and Polen have provided data for the database. Data from Germany includes incidental- and effort sightings, strandings

and bycatches, and has been provided by the Forschungs und Technologiezentrum Westküste/University of Kiel, the German Oceanographic Museum in Stralsund as well as from the Gesellschaft zum Schutz der Meeressäuger e.V.. From Sweden the Swedish Museum of Natural History has provided data of incidental sightings, strandings and bycatches and from Valdis Pilats in Latvia, records of bycatch and historical data have been received. Iwona Kuklik, Hel Marine Station, Polen has provided Polish data of stranded and bycaught animals as well as historical data, and from the organisation European Seabirds at Sea (ESAS) we have received effort sightings.

A few other countries have also given their positive responses, and it is hoped that in the near future all countries surrounding the Baltic Sea will be involved in this cooperation, sharing their information regarding harbour porpoises with other researchers as well as spreading their knowledge to the general public. This is an ongoing project, therefore also new data from all countries can be added as soon as available. Contact details of where to send this data will be presented on www.balticseaporpoise.org. Any other comments or questions, please contact the first author.

REFERENCES

Berggren, P. 1994. Action Plan for the Harbour porpoise in Swedish Waters. Document at the first meeting of Parties to ASCOBANS, 26-28 September, Stockholm. CMS/ASCOBANS/1/DOC.5.

Berggren, P., Hiby, L. and Lovell, P., Scheidat, M. 2003. Abundance of harbour porpoises in the Baltic Sea from aerial surveys conducted in summer 2002. Final report to the Swedish Environmental Protection Agency, The Swedish Board of Fisheries and WWF-Sweden. 16pp.

Gillespie, D., Berggren, P., Brown, S., Kuklik, I., Lacey, C., Lewis, T., Matthews, J., McLanaghan, R., Moscrop, A., Tragenza, N. 2003. The relative abundance of harbour porpoises (*Phocoena phocoena*) from acoustic and visual surveys in German, Danish, Swedish and Polish waters during 2001 and 2002. Paper presented to 10th AC ASCOBANS. March 2003, Bonn.

Hiby, L., Lovell, P. 1996. Baltic/North Sea Aerial Surveys – final report. 11pp + Appendix (unpublished)

Huggenberger, S., Benke, H., Kinze, C.C. 2002. Geographical variation in the harbour porpoise (*Phocoena phocoena*) skulls: Support for a separate non-migratory population in the Baltic Proper. *OPHELIA* 56 (1): 1-12

Schulze, G. 1996 Die Schweinswale. Familie Phocoenidae. Die Neue Brehm- Bucherei Bd. 583. *Westarp Wissenschaften*, Magdeburg, 191 pp.

Tiedemann, R., Harder, J., Gmeiner, C. and Haase, E. 1996. Mitochondrial DNA sequence patterns of Harbour porpoises (*Phocoena phocoena*) from the North and the Baltic Sea. *Zeitschrift für Säugetierkunde* 61:104-111.



Baltic Sea Porpoise Project

Welcome

[Home](#)

[Information](#)

[Contact](#)

[Database](#)

[Contribute](#)

The Baltic Sea Porpoise Project is a part of the Jastarnia project, and funded by the Federal Agency of Nature conservation in Germany. The project is based on a database for sightings, strandings and bycatches of harbour porpoises in the Baltic Sea, and the idea is that all organisations/agencies around the Baltic Sea can provide data. The goal of the project is to work as a forum for researchers as well as an educational tool for the general public.

We thank the following parties for their contributions

Iwona Kuklik(Poland), Valdis Pilats(Latvia) and

