



## Baltic Marine Environment Protection Commission

Ad hoc Seal Expert Group

SEAL 11-2017

Gothenburg, Sweden, 4-7 October 2017

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<b>Document title</b>	German proposal for a border for the HELCOM database on porpoise incidental sightings
<b>Code</b>	5-4
<b>Category</b>	DEC
<b>Agenda Item</b>	5 – Work on Baltic Sea harbour porpoise
<b>Submission date</b>	5.10.2017
<b>Submitted by</b>	Germany

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### Background

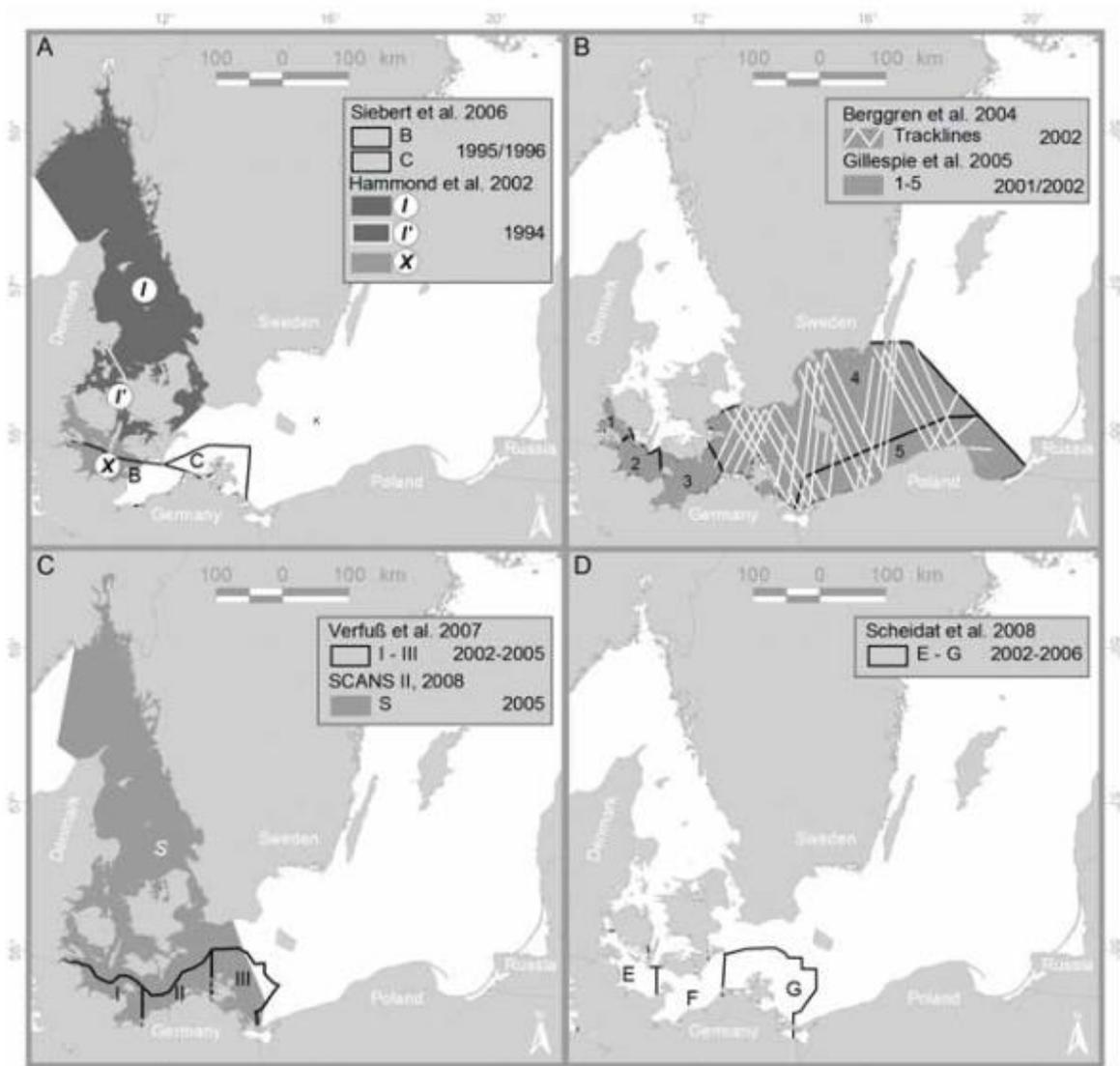
Harbour Porpoise sightings are collected in the HELCOM database at the moment throughout the Baltic Sea starting in the Kattegat/Skaggeak to the south and east with highly differing effort in each country. SEAL 9 noted that the incidental sightings database is primarily aimed at collecting all available data for the critically endangered Baltic Sea harbour porpoise population. It was therefore necessary to decide on a practical border for the HELCOM database of incidental sightings to include all sightings from the Baltic Proper Population while retaining only few sightings of the much more numerous Western Baltic Sea (Inner Danish Waters) population (SEAL 10, Doc 6.4). This document incorporate comments received until SEAL 11.

This document contains the German proposal to use the Darß' and Limhamn Sills as the border for the HELCOM database on porpoise incidental sightings.

### Action requested

The Meeting is invited to consider, discuss and agree on the border.

## Proposal to use the Darß' and Limhamn Sills as the border for the HELCOM database on porpoise incidental sightings



**Figure 4.1.1.** Survey areas for the studies listed in Table 4.1.1. The area of Hiby & Lovell (1996) (not shown) matches the survey area of Berggren et al. (2004) shown in (B) excluding a narrow area along the Polish coast. Survey area I' of Hammond et al. (2002) (in A) is part of survey area I.

Figure 1 Map showing surveys carried out until 2009 targeting porpoise abundance in the Baltic Sea. (from Verfuß et al., 2009).

For deciding on a border it has to be taken into account that past surveys were not based on population or management borders (Figure 1). Results of the SAMBAH project show a clear separation between Baltic Sea population and Western Baltic population in summer (Figure 2), but no such border can be found in winter, when porpoises of the Baltic Proper may be found as far east as the Darss and Drogden/Limhamn Sill. Since in the meantime the Jastarnia Plan was updated based on information from SAMBAH aiming at protecting the Baltic Proper subpopulation it is best to consider the Jastarnia Plans findings for proposing a boundary.

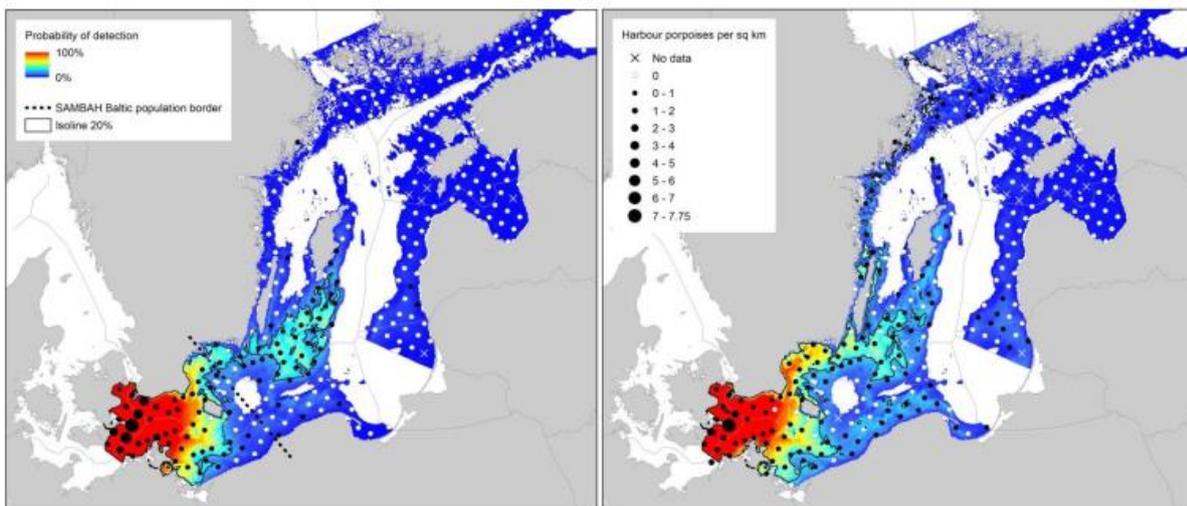


Figure 2 Predicted probability of detection of harbour porpoises per month in the SAMBAH project area during May – October (left) and November – April (right). The black line indicates 20% probability of detection, approximately equivalent to the area encompassing 30% of the population, often used to define high-density areas. The dots or crosses show the probability of detection at the SAMBAH survey stations. The border indicates the spatial separation between the Belt Sea and Baltic harbour porpoise populations during May – October according to SAMBAH (from ASCOBANS, 2016).



Figure 3 Map showing the future border for the incidental sightings database of HELCOM (from (ASCOBANS, 2016)

Four recent studies have considered borders between populations: (Benke et al., 2014; Gallus et al., 2012; Sveegaard et al., 2015) and now the SAMBAH report. Benke et al and Gallus et al showed that most probably animals from the Baltic proper use the Pomeranian Bay in Winter times and these results are in line with SAMBAH results. Sveegaard et al 2015 was aimed at proposing a summer population boundary for the Belt Sea subpopulation and not for the Baltic Proper and also states so in her paper.

Therefore to include as many sightings as feasible for the Baltic Proper (to not lose possibly helpful information) while excluding as much data as possible from the much more numerous Belt Sea population it is necessary to move the border to somewhere between north of Rügen to the Darss Sill. Since all older data refer to the Baltic Proper as the range of porpoises from the Baltic Sea it seems to be best to base it still there and that would mean to propose the Darss' and Drogden Sills (Figure 2) as the border for the incidental sightings database. This coincides with the SAMBAH project area (Figure 3).

This border is intended purely for the HELCOM database and is by no means a management or population border.

### References

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