

Grey Seal surveys in the Wadden Sea and Helgoland in 2014-2015

The first aerial surveys in Denmark



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Introduction

During the grey seal (*Halichoerus grypus*) pupping season in the winter of 2014-2015, the Danish, Dutch and German Wadden Sea areas were surveyed by means of coordinated aerial and boat counts. On Helgoland (Germany), surveys were carried out from land, whilst in Schleswig-Holstein the pup counts were conducted either from land or by boat. Furthermore, in the spring of 2015, dedicated grey seal aerial surveys were carried out during the moulting period (March-April) throughout the Wadden sea area. For the Danish Wadden Sea it was the first time that dedicated grey seals surveys were performed.

Results and Interpretation

The maximum number of grey seal pups counted in the Wadden Sea around the pupping peak in December was 829, including the first (and single) pup recorded in the Danish Wadden Sea (Lasse Fast Jensen et al. 2015). On Helgoland only cumulative data were available, and at the time of the survey 216 pups had been born. This is an overestimate compared to the surveys when only the animals present at that time were recorded and pups that had already left or died were not included. 510 pups were counted in the Netherlands, 99 in Lower Saxony/Hamburg and 3 in the Wadden Sea area of Schleswig-Holstein.

Despite the difficulty of comparing the Helgoland data to those from other areas, it is clear that pup numbers in the Wadden Sea area have grown again compared to last year (Brasseur et al. 2014). These increases amounted to more than 19% in the Netherlands and 17% in Lower Saxony. The start of the aerial survey in Denmark allowed recording the first verified birth in this area, indicating that grey seals are expanding northwards and colonising the entire Wadden Sea.

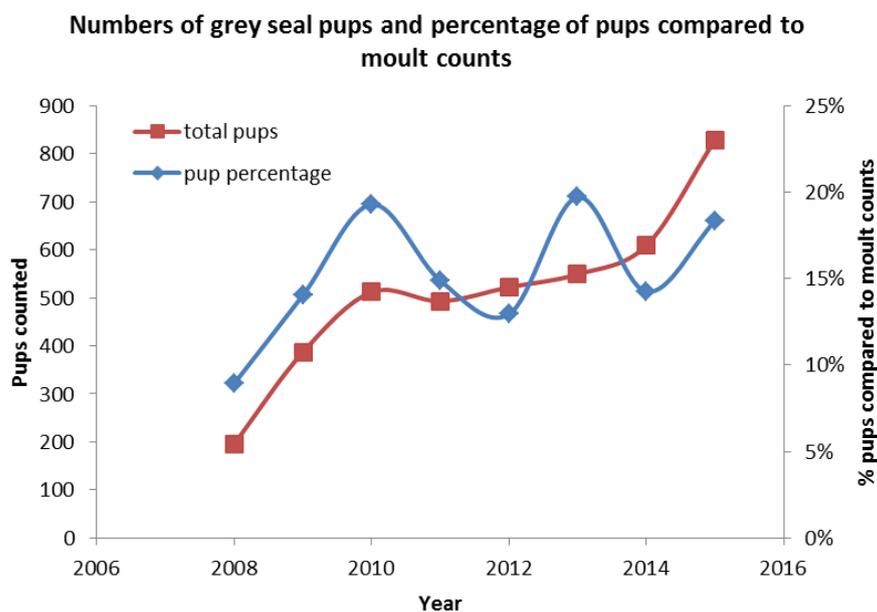


Figure 2. Number of pups counted in the Wadden Sea (red line, left vertical axis) in the years 2008-2015. The number of pups as a percentage of the total moult count is given by the blue line (right vertical axis).

The maximum numbers of grey seals counted in the different areas showed a variable picture: In Denmark, this is the first official count of grey seals in the moulting period. The 88 grey seals observed confirm that the species is expanding northwards. This trend was already recorded earlier based on the summer surveys (Brasseur et al. 2014). At Helgoland the counts dropped from 623 animals in 2014 to only 555 (-12%) in the survey period in 2015. In the Wadden Sea of Schleswig-Holstein, it was observed that despite the low pup

reports, the number of grey seals using the area during the moult had grown to 121 animals (+49%) and in Lower Saxony/Hamburg a slight drop to 213 grey seals was recorded on the chosen counting day. 293 animals were observed later in the season. In the Netherlands, numbers of grey seals during the moult grew to a maximum count of 3544. All in all, the total numbers recorded during the period increased slightly, namely by 5% to 4521 grey seals. The growth is slightly lower than observed on average since 2008 and certainly lower than the growth in the number of pups born in the region.

In the Netherlands it was shown that during the moult not only grey seals were breeding locally, but additional animals, probably from the UK, were present (Brasseur et al. 2015) as well. It was therefore not surprising that the dynamics of the pup and moult counts differed. One would expect that in the future, once the continuous influx from the UK becomes less important, the growth in pup numbers would better reflect the total population, counted during the moult.

Numbers of grey seals counted in the Wadden Sea and Helgoland since 2008

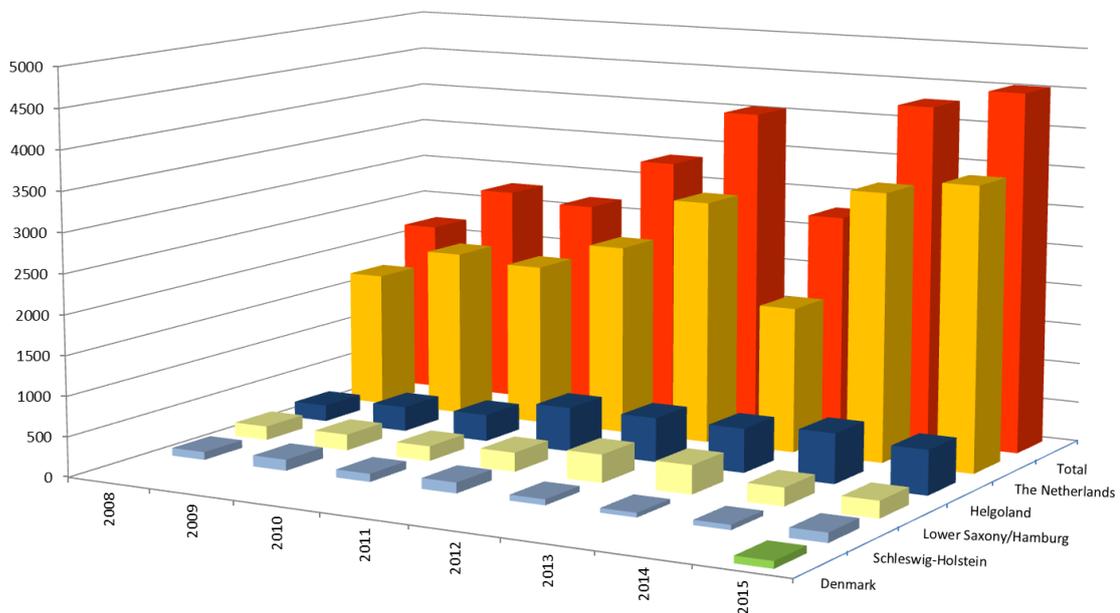


Figure 1.: Total number of grey seals counted in the Wadden Sea during the moult, as well as numbers broken down by region, for 2008-2015.

References

- Brasseur S, Czeck R, Diederichs B, Galatius A, Jensen LF, Körber P, Siebert U, Teilmann J, Klöpffer S (2014) Trilateral Seal Expert Group (TSEG). Grey Seal surveys in the Wadden Sea and Helgoland in 2013-2014. Grey seal population recovered after decrease. CWSS, Willemschaven
- Brasseur SMJM, van Polanen Petel TD, Gerrodette T, Meesters EHWG, Reijnders PJH, Aarts G (2015) Rapid recovery of Dutch gray seal colonies fueled by immigration. *Marine Mammal Science* 31:405-426
- Lasse Fast Jensen, Galatius A, Teilmann. J (2015) First report on a newborn grey seal pup (*Halichoerus grypus*) in the Danish Wadden Sea since the 16th Century. *Marine Biodiversity Records* 8:e131.

Front page photo: During the moult of 2015, over 2500 grey seals were observed on one site the Engelse Hoek in the Dutch Wadden Sea. On this picture more than 1300 animals were counted.