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GREY SEAL SURVEYS OF THE WADDEN SEA AND HELGOLAND 2020-2021



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GREY SEAL SURVEYS

INTRODUCTION

In accordance with the annual Wadden Sea grey seal monitoring scheme, which started in 2008, coordinated aerial surveys were carried out around the end of 2020 and the beginning of 2021, covering the sandbanks in Denmark, Germany and the Netherlands. Additional land-based counts were conducted on Helgoland. The pup production, which is indicative of the development of the local breeding population in the Wadden Sea, is monitored by three counts between November and January. The two surveys that take place during the moult in March and April, provide information on the number of grey seals using the Wadden Sea. While peak numbers of seals are observed on the Wadden Sea sandbanks during the moult, it is important to note that these numbers include both individuals breeding locally as well as migrating seals from the much larger population in the UK. Therefore, more grey seals are counted during the moult than would be expected from the pup production in the Wadden Sea (Brasseur et al., 2015).

Aerial surveys of Grey Seals in the Wadden Sea in 2020-2021: counts show continued growth.

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RESULTS AND INTERPRETATION

PUP COUNTS

The coordinated counts in the pupping season of 2020-2021 resulted in a total of 1927 pups in the whole Wadden Sea (Figure 1), representing a growth of 12% compared to 2019-2020 (Brasseur et al., 2020) and 11% per year over the past five years. With 1026 grey seal pups counted, the number in the Dutch part of the Wadden Sea was 10% higher compared to last season. Interestingly, compared to 2018-2019 (1062 pups), pup counts were still 3.4% lower. This could be an indication of changes in the trend of pup numbers in this area, however

it is too early to draw conclusions. In the coming pupping seasons, extra attention should be paid to possible changes in the Dutch Wadden Sea. In Lower Saxony (341 pups) and Helgoland (559 pups) pup numbers have grown in 2020-2021 by almost 16% and 12%, respectively. During the coordinated surveys of the Wadden Sea area of Schleswig Holstein, one pup was counted while none were seen in Denmark. However, later in the season three pups were observed in the Danish Wadden Sea. Time will tell whether breeding colonies will recover or develop in these areas.

Sophie Brasseur: WMR



Numbers of grey seal pups and percentage of pups compared to moult counts

● Denmark ● Schleswig-Holstein ● Helgoland ● Lower Saxony and Hamburg ● Netherlands ● Percentage of pups relative to the number of counted seals

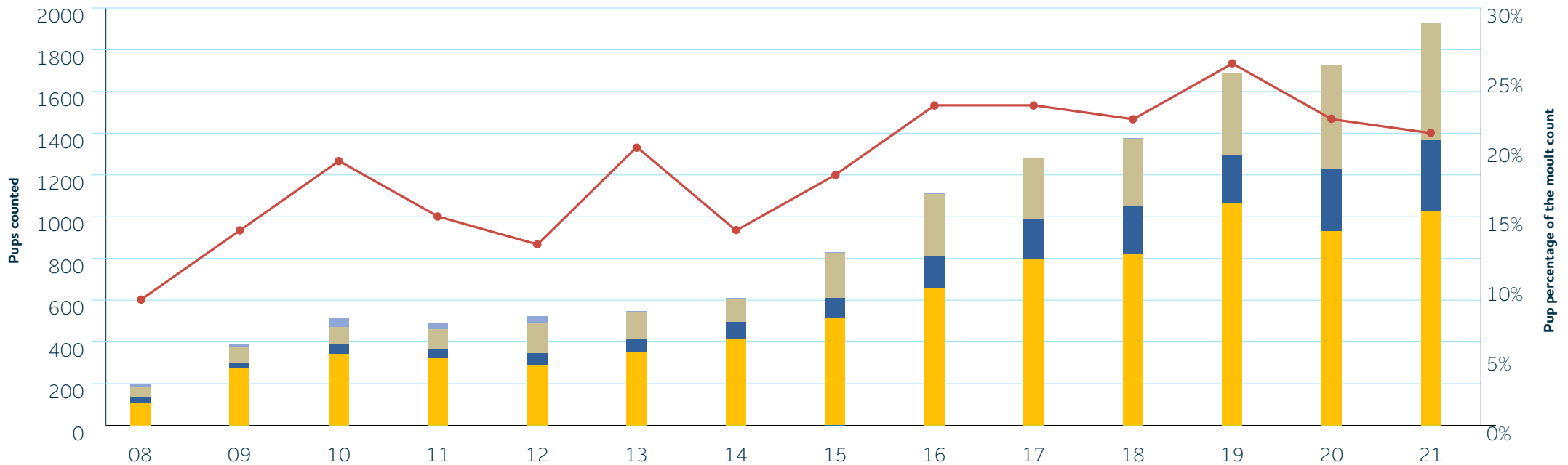


Figure 1. Number of grey seal pups counted in the Wadden Sea in November-January. The red line indicates for the whole Wadden sea area, the percentage of pup numbers relative to the total number of grey seals counted during the moult in March-April.

RESULTS AND INTERPRETATION

MOULT SURVEYS

Although the individual moulting process might take months, grey seals aggregate more intensively on land during the late stages of the moult in March and April, when the changes in the fur are clearly visible (Schop et al., 2017). The moult counts include migrating seals from the UK, and the proportion of grey seals that is hauled out on land or at sea is unknown. Thus, the moult count represents an index, rather than a population estimate, which can be used to show relative changes in the

abundance of grey seals in different Wadden Sea regions.

In April 2021, a total of 9069 grey seals were counted in the Wadden Sea area, this represents a 16% increase compared to last year and an average growth of 13% per year over the past five years (Figure 2). The number of moulting seals counted in the Dutch waters increased substantially, by more than 1000 seals (+19%), amounting to a total of 6788 animals. In Lower Saxony, numbers grew by

almost 26% to 913 seals, while on Helgoland numbers grew by 17% compared to 2020, with 1041 grey seals counted. In the Wadden Sea area of Schleswig Holstein only 18 animals were counted, a drop of more than 90%. In Danish waters, 309 animals were counted, almost 16% more than in 2020.

Because hardly any pups are born in these latter two areas, variation in numbers observed during the moult counts might be more affected by

factors driving exchange between colonies, than the other areas. Interestingly, in the eastern part of the Wadden Sea, i.e. Denmark, Schleswig-Holstein and Helgoland, higher numbers seem to be attained earlier in the season, in March. This year, March counts were respectively 353, 508 and 1292. It is, however, unknown if the differences between the surveys are the result of seals moving to other Wadden Sea areas in April or if this represents variation in haul out of local seals.

Moult survey total number of grey seals in the Wadden Sea

● Denmark ● Schleswig-Holstein ● Helgoland ● Lower Saxony and Hamburg ● Netherlands ● Total

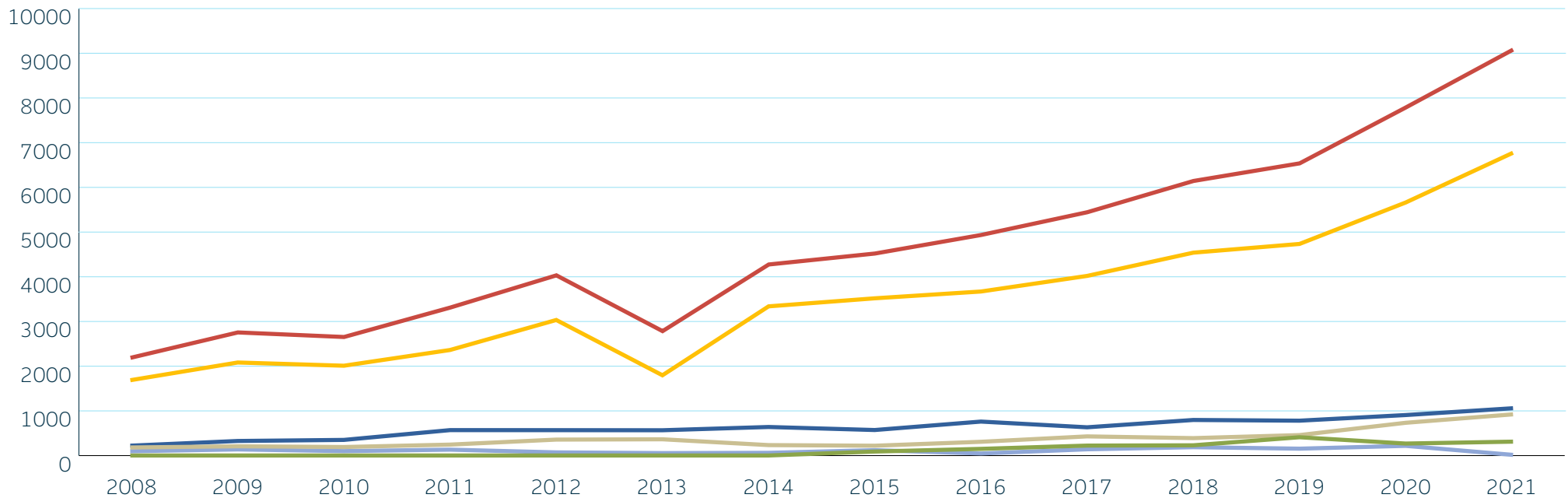


Figure 2. Total number of grey seals counted in the Wadden Sea during the moult, as well as numbers per region, for 2008-2021.



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CONCLUSION

Summarising the monitoring results, the breeding population in the Wadden Sea (indicated by the pup numbers) has grown at an average annual rate of 11% over the past five years. In the same period, the numbers counted during the moult also continued to grow, at an average annual rate of 13%. In the coming years, the development of the breeding colonies in the Netherlands will be of particular interest, as in the last two years, the pup numbers in this region have been lower than the peak numbers from the breeding season 2018-2019.

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