



COMMON WADDEN SEA SECRETARIAT

# **GREY SEAL NUMBERS IN THE WADDEN SEA AND ON HELGOLAND IN 2021-2022**





## GREY SEAL SURVEYS

# INTRODUCTION

Since 2008, annual coordinated aerial surveys have been conducted to monitor the number of grey seals in the Wadden Sea, covering the sandbanks in Denmark, Germany and the Netherlands. Additional land-based counts were conducted on Helgoland, an offshore island in the German Bight. In the pupping season, between November and January, grey seal pups are counted, providing information on the development of the local breeding population. In March and April, the seals are counted during moult, which provides information on the number of grey seals using the Wadden Sea and Helgoland. The grey seals in this area are part of a larger population in the North Sea, including the United Kingdom. Migrating animals are likely to influence the trilateral counts during the moult (Brasseur et al. 2015). The counted numbers represent an index, which can be used to show relative changes in the abundance of grey seals in the different Wadden Sea areas. Trends should be considered over several years, as annual changes could be influenced, for example, by the weather.

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RESULTS AND INTERPRETATION

# PUP COUNTS



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The coordinated counts in the pupping season in November-January of 2021-2022 resulted in a total of 2,214 pups in the whole Wadden Sea and Helgoland (Figure 1). This represents a growth of 15% compared to 2020-2021 (Brasseur et al. 2021). The average growth rate in pup numbers over the last five years was 12%. Most

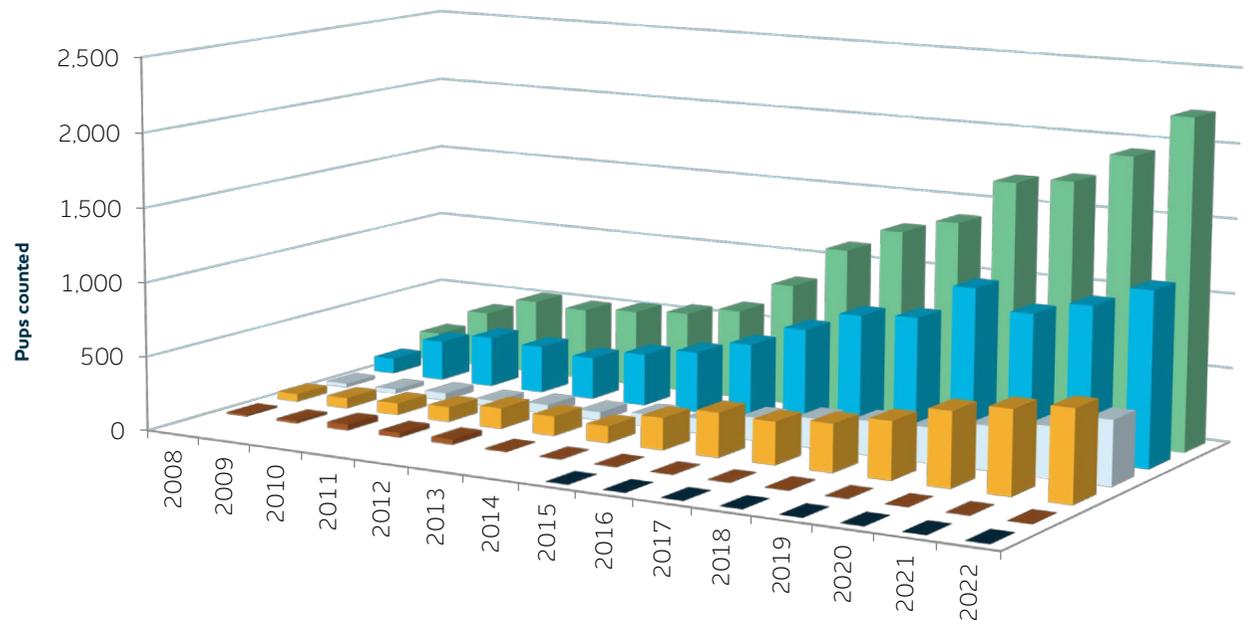
pups were recorded in the Dutch Wadden Sea, Helgoland and Lower Saxony. During the peak 1,168 pups were counted in the Dutch part of the Wadden Sea, 14% more than last season. The number on Helgoland increased by 9% to 611 pups. In Lower Saxony, the number of pups increased by 27% compared to last season, to 432 grey seal pups, although due to

bad weather conditions only the main breeding area on the Kachelotplate could be surveyed. During these coordinated surveys three pups were counted in the Wadden Sea area of Schleswig Holstein, while none were seen in Denmark. However, later in the season one pup was observed in the Danish Wadden Sea.

**Number of grey seal pups counted in the Wadden Sea between 2008 and 2022.**

Colours indicate results of the regional counts.

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



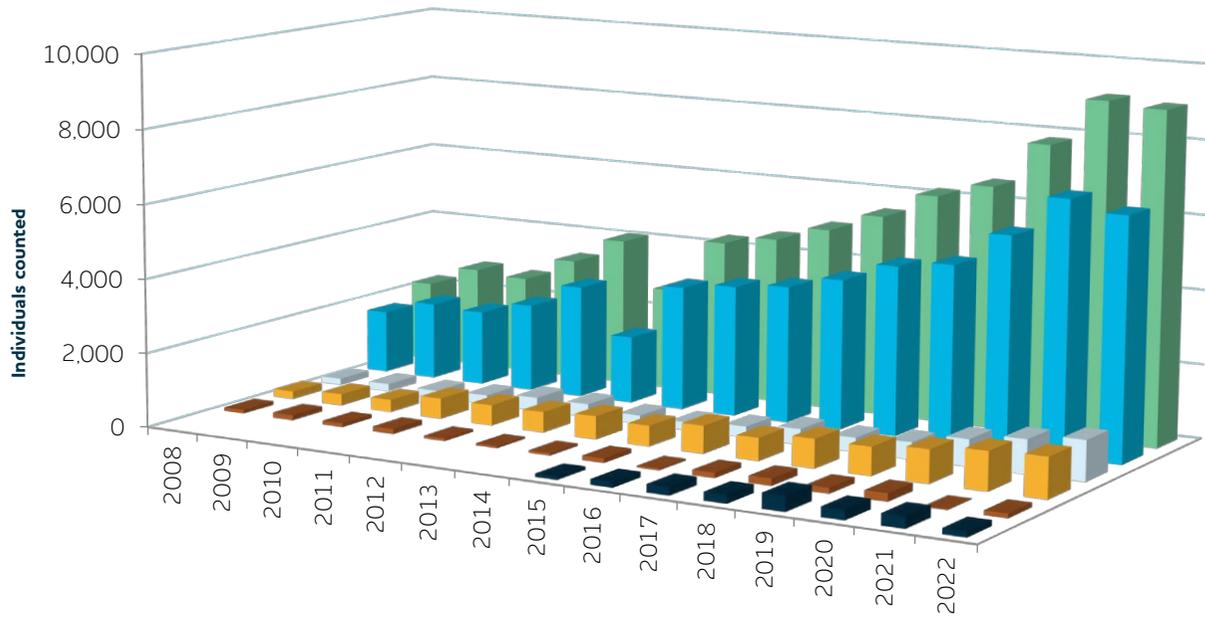
RESULTS AND INTERPRETATION

# MOULT SURVEYS

Number of grey seals counted in the Wadden Sea regions during the moult between 2008 and 2022.

Colours indicate results of the regional counts.

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



Although the individual moulting process might take months, grey seals aggregate more intensively on land during the stage of moult when changes in colour of the fur are clearly visible (indication of moulting), in March and April (Schop et al. 2017). The moult counts may include an unknown number of migrating seals from the UK; moreover, the proportion of grey seals that is hauled out on land or are at sea is unknown.

In April 2022, a total of 8,948 grey seals were counted in the Wadden Sea area, a decrease of 121 animals (1%) compared to the year before (Figure 2). In the last five years, the average annual growth was 10%.

In the Wadden Sea, the highest abundance of grey seals during moult was observed in the Dutch part where 6,500 grey seals were counted this season, a drop of 4% compared to the 6,788 individuals counted in 2021. Numbers in the Netherlands represent 73% of all grey seals in the Wadden Sea. The numbers both on Helgoland and in Lower Saxony and Hamburg grew compared to 2021 by 5% to 1,090 individuals and 19% to 1,086 individuals, respectively. This year 120 individuals were counted in the Wadden Sea area of Schleswig-Holstein, while in 2021 only 18 seals were counted during the coordinated count. In this area tidal conditions are thought to affect the availability of haul out sites to moult on, making it difficult to determine a trend in these low numbers. In Danish waters, 152 grey seals were counted, a decrease of 51% compared to 2021.

In lack of local breeding colonies in Denmark and Schleswig-Holstein, indicated by the low pup numbers, almost all grey seals present during the moult are assumed to come from other breeding areas. This might also explain the large annual variation observed during the moult counts. Interestingly, in this eastern part of the Wadden Sea, higher numbers seem to be attained earlier in the moulting season: in March rather than April. This year in March 280 and 191 grey seals were counted in Denmark and Schleswig-Holstein, respectively. This pattern is similar on Helgoland, where a maximum of 1,346 grey seals were counted in March 2022. It is 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 behaviour of local seals.

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## GREY SEAL SURVEYS

# CONCLUSION

Summarising this years' results, the Wadden Sea grey seal pup production has grown at an average annual rate of 12% over the past five years. Over the same period, the numbers counted during the moult have grown at an annual rate of 10%, although numbers dropped slightly this year especially due to lower number in the Netherlands. It is not clear what caused this. We encourage research on the peak of grey seal number variations during moult and pupping between the different Wadden Sea areas, and the role of immigrating grey seals from the United Kingdom.

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### References

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