**Supplementary Table 1**. Grey seal count data at haul-out locations in Danish Kattegat from Baltic pupping/Atlantic pre-peak moult seasons 2011-2021 (early-mid March), Atlantic peak moulting season 2022-2023 (early April), Baltic peak moulting season 2011-2023 (late May-early June) and grey seal pup counts during the Atlantic pupping seasons (December-January) 2021/2022-2022/2023. The vertical red line represents the border between the northern and southern/central areas, where grey seal distribution differed between Atlantic and Baltic moulting seasons as described in the text. For pup surveys, the total grey seal count is given with the pup count in parantheses.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** | **Borfeld** | **Knobgrundene** | **S. Rønner** | **Totten** | **Hesselø** | **Sjællands Rev** | **Bosserne** |
| **Baltic pupping/Atlantic pre-peak moult, total grey seals (pups)** | | | | | | | |
| March 8, 2011 | 44 (0) | 0 (0) | 2 (0) | 2 (0) | 0 (0) | - | - |
| March 13, 2012 | 69 (0) | 0 (0) | 1 (0) | 2 (0) | 1 (0) | - | - |
| March 12, 2013 | 68 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | - | - |
| March 7, 2014 | 3 (0) | 0 (0) | 0 (0) | 3 (0) | 0 (0) | - | - |
| March 13, 2015 | 83 (1) | 1 (0) | 15 (0) | 20 (1) | 0 (0) | - | - |
| March 15, 2017 | 10 (0) | 0 (0) | 0 (0) | 1 (1) | 0 (0) | - | 11 (1) |
| March 14, 2018 | 68 (0) | 0 (0) | 1 (0) | 6 (0) | - | - | 4 (0) |
| March 12, 2019 | 82 (0) | 0 (0) | 0 (0) | 0 (0) | 6 (0) | - | 11 (0) |
| March 16, 2020 | 90 (0) | 0 (0) | 1 (0) | 14 (0) | 1 (0) | - | 8 (0) |
| March 17, 2021 | 99 (1) | 0 (0) | 4 (0) | 0 (0) | 0 (0) | 0 (0) | 10 (0) |
| **Atlantic peak moulting season, total grey seals** | | | | | | | |
| April 5, 2022 | 62 | 0 | 9 | 2 | 0 | - | 26 |
| April 4, 2023 | 100 | 1 | 3 | 0 | 0 | 1 | 18 |
| **Baltic peak moulting season, total grey seals** | | | | | | | |
| June 10, 2011 | 0 | 0 | 4 | 10 | 0 | 0 | 5 |
| June 6, 2012 | 0 | 0 | 2 | 1 | 0 | 0 | 0 |
| May 30, 2013 | 1 | 0 | 20 | 4 | 0 | - | - |
| May 25, 2014 | 4 | 0 | 18 | 15 | 1 | - | - |
| May 29, 2015 | 8 | 6 | 24 | 17 | 1 | - | - |
| June 1, 2016 | 12 | 2 | 12 | 11 | 1 | - | - |
| June 1, 2017 | 10 | 0 | 10 | 42 | 1 | - | 25 |
| June 4, 2018 | 3 | 0 | 3 | 8 | 0 | - | 10 |
| May 28, 2019 | 6 | 4 | 34 | 151 | 0 | - | 26 |
| May 26, 2020 | 37 | 0 | 64 | 39 | 7 | - | 28 |
| June 2, 2021 | 3 | 0 | 22 | 47 | 1 | 0 | 1 |
| May 27, 2022 | 2 | 0 | 46 | 77 | 0 | - | 35 |
| May 25, 2023 | 25 | 0 | 32 | 79 | 2 | 0 | 3 |
| **Atlantic pupping season, total grey seals (pups)** | | | | | | | |
| Dec 16, 2021 | 20 (0) | 0 (0) | 1 (0) | 1 (0) | 0 (0) | - | 3 (0) |
| Jan 6, 2022 | 25 (1) | 0 (0) | 4 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) |
| Dec 15, 2022 | 41 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | - | 10 (0) |
| Jan 3, 2023 | 57 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 8 (0) |