



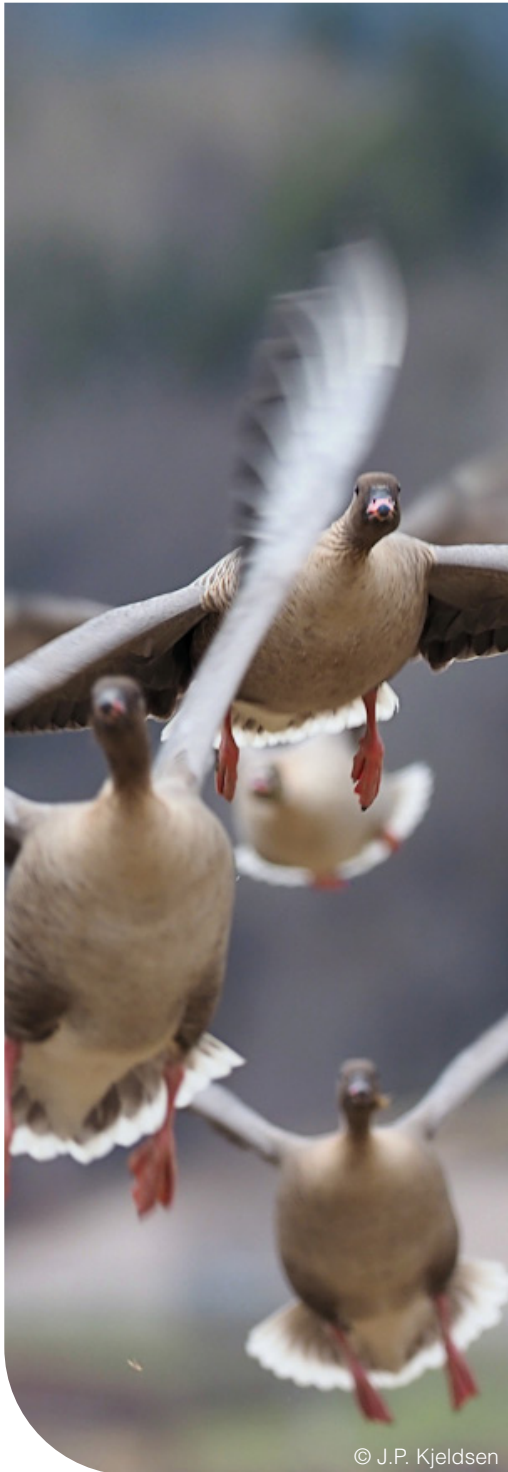
AEWA European Goose  
Management Platform

# Briefing Note

Population status and management recommendations

*EGM IWG8 in 2023*





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## Background

The European Goose Management Platform (EGMP) was established in 2016 under the auspices of the African-Eurasian Waterbird Agreement (AEWA) to provide the mechanism for a structured, coordinated and inclusive decision-making and implementation process for the sustainable use and management of goose populations in Europe, with the objective of maintaining them at a favourable conservation status, while taking into account concerns of relevant stakeholders and the pertinent legislative frameworks and regulations.

Currently, four goose species are managed under the EGMP; the Svalbard Pink-footed Goose population, three populations of Taiga Bean Goose (the Scandinavia/Denmark and UK population, the West Siberia/Poland and Germany population, and the Finland and NW Russia/Sweden, Denmark and Germany population), two populations of Barnacle Goose (E Greenland/Scotland and Ireland population and Russia/Germany and Netherlands population) and the NW/SW European Greylag Goose population.

Each year the EGMP Population Status and Offtake Assessment Report provides the status, offtake

assessment, and management guidance for the goose populations managed under the EGMP. The information covers aspects related to population status, survival, and productivity, as well as an assessment of the cumulative impact of derogation and legal hunting and, for some populations, an assessment of the optimal harvest strategy.

Following the annual assessment process, the European Goose Management International Working Group (EGM IWG) meets to discuss the findings of the EGMP Population Status and Offtake Assessment Report and on this basis provide management recommendations for each population.

This briefing note provides the main messages from the EGMP Population Status and Offtake Assessment Report 2023 and the management recommendations by the 8th annual meeting of EGM IWG in 2023. Note that management recommendations follow the wording of the EGM IWG8 decisions agreed on by the EGM IWG members.

For more information about the EGMP and previous results please visit our website (<https://egmp.aewa.info/>).

## Status of Pink-footed Goose

The May 2023 population estimate was 62,822 individuals and appears to have declined, as per the objectives of the management plan, since the implementation of the adaptive harvest management program in 2013. We note, however, that the last several years of May population estimates are highly uncertain.

Furthermore, it appears that the November count has become increasingly biased high, possibly because of increased numbers of Barnacle Geese in the counting areas, making accurate identification at a distance difficult. Also, it appears that Pink-footed Geese have become more dispersed on the staging grounds in Trøndelag, Norway in May, exacerbating the likelihood of a low count. We also point out that the harvest has decreased rather dramatically in Denmark during the last two years for reasons that are still unclear. The estimated harvest quota for the 2023/2024 hunting season is 7,300 (2,190 and 5,110, for Norway and Denmark respectively). We emphasize, however, that we can only say with 80% certainty that the total quota lies between 0 and 15,650.

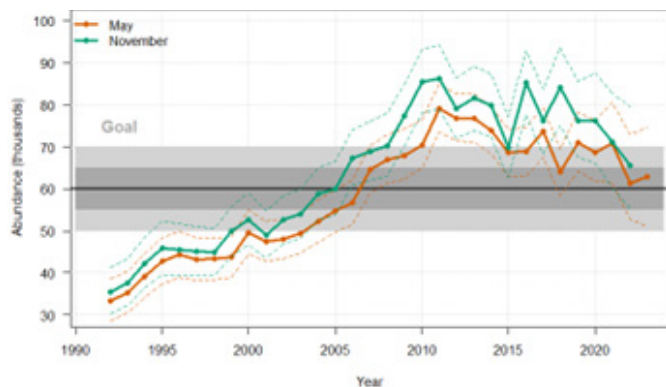


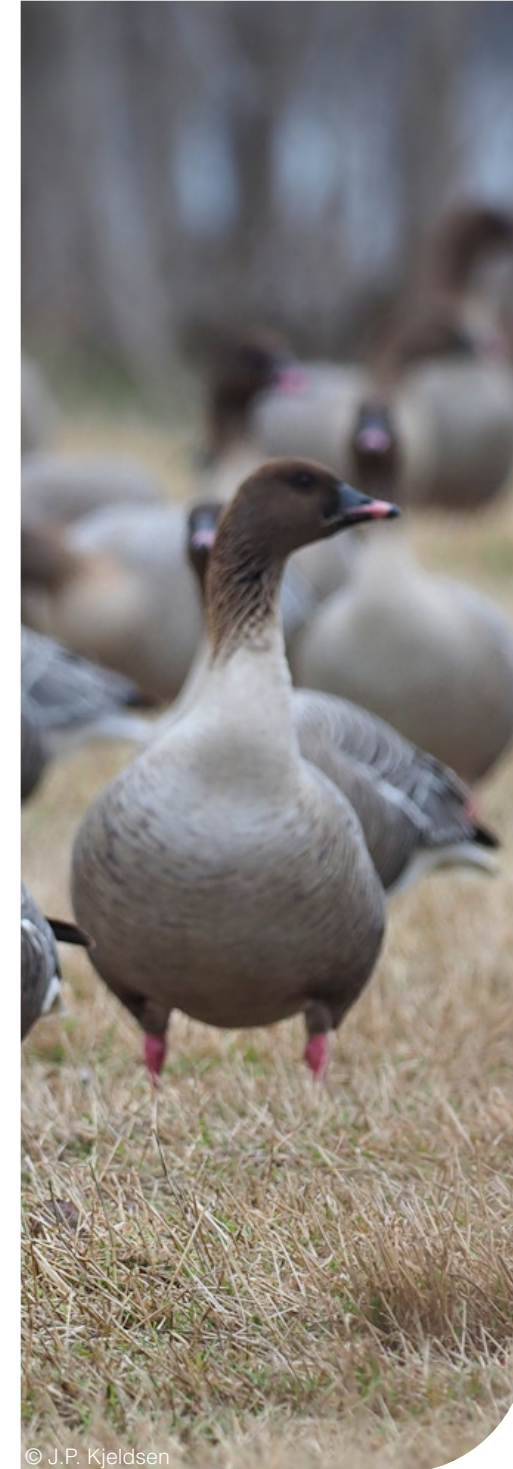
Figure 1. IPM-based estimates of abundance of Svalbard Pink-footed Geese in May and November, relative to the goal of 60,000 (95% credible intervals are indicated by the dashed lines). The dark grey band centered on the goal defines near-complete stakeholder satisfaction with population sizes, while the light grey band exhibits  $\geq \frac{1}{2}$  of maximum satisfaction.

## Management recommendations for Pink-footed Goose

EGM IWG agreed, in light of the data uncertainties, to postpone the decision on a new regulation of harvest until its next annual meeting in June 2024 while the Data Centre attempts to better estimate the magnitude and reasons for the biases in the May and November counts. However, the harvest for 2023/2024 should not exceed the total harvest during the last two years averaging to 9,577 (with the following allocation between Norway and Denmark: 2,873 and 6,704). EGM IWG also agreed that this postponement is an exceptional one-off action and shall not be considered as a precedent for any future decisions when facing comparable circumstances.

Furthermore, following the postponement of harvest regulations, the following actions shall be taken as soon as possible, to address the data uncertainties and provide an example of how to tackle significant uncertainty in model estimates:

- 1) the Data Centre will investigate biases in May and November counts and outline possible options for tackling them. Denmark offered to cover estimated time needed for the bias analysis; and
- 2) the Range States and the Data Centre will maintain close communication as soon as the Data Centre has concluded the investigation and has proposed possible actions. Finally, Denmark will communicate with Danish hunters to reduce hunting bags in Denmark on a voluntary basis.



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### Status of Taiga Bean Goose

In the Scandinavia/Denmark and UK population (former Western Management Unit (MU)), the January count in 2023 was quite low (631 birds), but there were difficulties experienced in the count, particularly in the UK. There is no information on the status and demography of the West Siberia/Poland and Germany population (former Eastern1 MU) beyond what was reported in the 2021 Population Status and Assessment Report. In the Finland and NW Russia/Sweden, Denmark and Germany population (former Central MU), the March 2023 population estimate was 66,166 individuals, which is similar to the March 2022 estimate of 65,428. Of particular concern to harvest management is that the current estimate of the carrying capacity for the breeding population is 70,194 birds, which is essentially the same as the population target of 70,000. We emphasize that if the spring population were at the estimated carrying capacity, there would be no harvestable surplus (i.e., any level of harvest would lead to a decline in equilibrium population size). A total annual harvest of 1,000 birds during the next two years is projected to maintain the population near its current level (on average). Due to hunting restrictions in the range states, the harvest has only averaged 153 birds during the last two years.

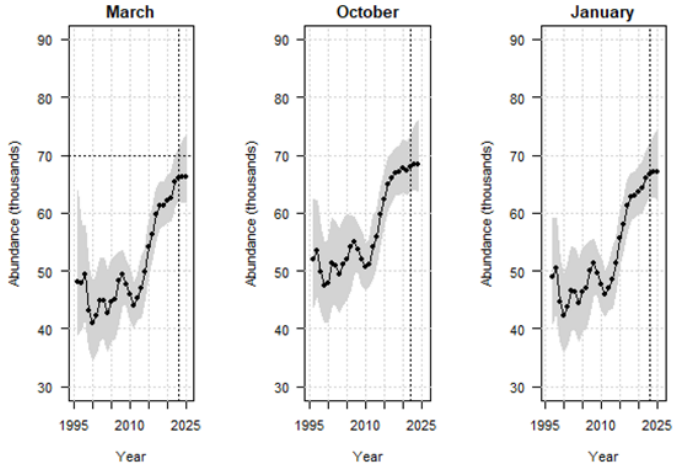


Figure 2. IPM-based estimates of population size (in black, with 95% credible intervals in grey) for Taiga Bean Geese in the Finland and NW Russia/Sweden, Denmark and Germany population. The vertical, dashed lines represent the last year of data. Future abundances were projected based on an assumed harvest of approximately 1,000 birds. The horizontal line at 70,000 in the left panel represents the median population target.

### Management recommendations for Taiga Bean Goose

The EGM IWG agreed on a total annual harvest of 1,000 birds (580 birds for Finland, 300 birds for Sweden and 120 birds for Denmark) in the Finland and NW Russia/Sweden, Denmark and Germany population for the next two seasons 2023/2024 and 2024/2025.

## Status of Greylag Goose

The International Waterbird Census (IWC) imputed values produced a total of 999,148 individuals in 2022. However, the IWC total should be viewed critically. Due to major data gaps in Spain after 2010, the estimates from Spain include a high degree of imputing, and consequently, the IWC imputed totals may overestimate the actual population size. The IWC imputed value for the population excluding estimates for Spain produced a total of 794,318. Counts from the post-breeding period produced a minimum of 389,115 individuals in 2022 for the migratory Management Unit 1 (MU1) (data are missing from Norway), and 646,198 for the sedentary MU2 (from Germany data are only available from North Rhine-Westphalia and Lower Saxony, i.e., only two out of 16 federal states). Finally, data suggest a minimum offtake of about 441,000 Greylag Geese during the season 2021/2022.

Due to 1) missing data, particularly summer counts and productivity estimates, and 2) current estimates of offtake that are biased high, the current assessment is not intended to prescribe the magnitude and distribution of offtake at this time. However, the assessment, based on basic life history information, showed that among 50 offtake strategies with high utility ( $\geq 0.85$ ), there are of two basic types: (a) those with relatively high spring/summer derogation and low winter offtake, and (b) those with low spring/summer derogation and relatively high winter offtake. This furthermore demonstrates that there is no unique level and distribution of offtake that could meet MU population targets. Rather, alternative approaches to coordinating offtake must be evaluated not only in terms of their ability to meet population targets, but also in terms of cost, feasibility, and legal mandates. However, once reliable empirical estimates of offtake become available, the model can be used to forecast the population trajectory under those levels of offtake to help determine whether the population is trending toward the target or Favorable Reference Population size (FRP) (e.g., as is done with Barnacle Geese). Also, given reliable estimates of derogations, the model could be used to help prescribe the level and distribution of sport harvest to help attain population targets.

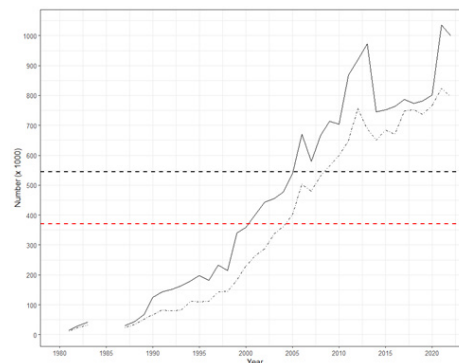
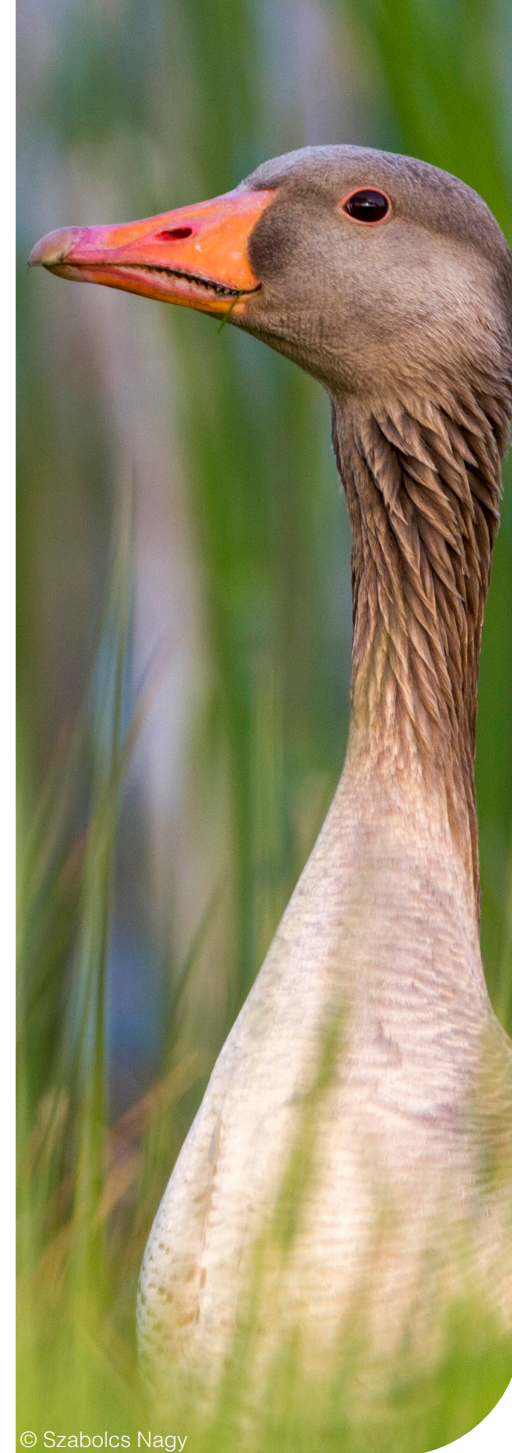


Figure 3. Development of the size (individuals) of the NW/SW European mid-winter population of Greylag Geese based on IWC imputed values from 1980-2022, with (solid line) and without estimates from Spain (dot-dashed line), as well as special goose count schemes in Denmark and the Netherlands. The dashed black line represents the target for the wintering population, and the red dashed line represents the FRP.

## Management recommendations for Greylag Goose

The EGM IWG acknowledged that due to data quality issues, at present the population cannot be managed in a coordinated manner across the Range States. However, considering that the population shows no declining trend, the Range States can, as a minimum, maintain the current level of offtake, until data quality issues are resolved. Furthermore, all Range States should focus on offtake strategies with proportionally higher non-breeding season offtake, thus minimising the need for breeding-season derogation within their respective national laws.

The Range States will continue working together with the Data Centre, and report on their activities, both number, methods, and actions taken in relation to offtake management at the national and regional level. Finally, the Task Force will continue the discussion on the use and way forward concerning how levels and distribution of offtake should be evaluated in terms of cost, feasibility, and legal mandates.



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## Status of the Barnacle Goose – Russia/ Germany and Netherlands population

In 2023, an intermediate assessment of the population status of the Russia/Netherlands and Germany population was undertaken. The flyway population size has reached a level of about 1.4 million individuals in 2021/2022. This is 3.7 times the Favourable Reference Population (FRP) size. Converted into breeding pairs, the size of the (still increasing) Russian breeding Management Unit 1 (MU1) (550,000 breeding pairs in 2021) is exceeding the 200% threshold level of the FRP multiple times. The Baltic MU2 is also well above the FRP (29,000 breeding pairs in 2021). The recent decline in the North Sea MU3 (2021: 15,000 breeding pairs) has brought it close to its FRP and clearly below the 200% threshold of the FRP. Thus, derogation efforts targeting the North Sea MU3 should be undertaken with caution and coordinated between the Range States. In 2021, within the EU countries, at least 66,165 Barnacle Geese were killed under derogation (data for Estonia missing), of which 90% were in the Netherlands and Denmark. Over recent years, combined offtake rates for the Russian MU1 and Baltic MU2 amount to around 4 and 5% for adults and 6 and 8% for juveniles. For the North Sea MU3, the last year with complete offtake data (2021) indicates a slight decrease in offtake rates for this MU (29% for juveniles and 28% for adults).

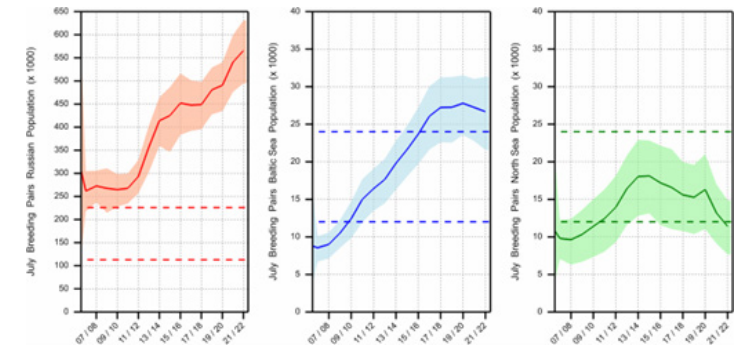


Figure 4. IPM-based means (solid line) and 95% posterior intervals (shaded areas) for the number of breeding pairs in July for the three MUs. Dashed lines are the FRP as well as the 200% of the FRP. Left in red MU1, centre in blue MU2, right in green MU3. In the IPM framework, the number of breeding pairs has been set as the number of individuals of 2 years and older, divided by 2. Note the different scale on the y-axes.

## Management recommendations for Russia/Germany and Netherlands population of Barnacle Goose

In terms of coordination of offtake for MU3, the Netherlands and Germany agreed that if significant derogation activities are planned in Germany, there should be coordination in place between the two countries. Otherwise, coordination should mainly take place within the Netherlands, where the national FRP has now been distributed across the provinces. Suspension or significant reduction of derogations has already taken place in some provinces in the Netherlands since the 7th annual meeting of EGM IWG in 2022.

## Status of Barnacle Goose – E Greenland/ Scotland and Ireland population

The first assessment of the status of the population was intended for 2023. However, due to a failure to report all data by the deadline, lack of data and understanding of avian influenza (AI) impact and lack of consideration on projection scenarios for coordinated offtake between Scotland and Iceland, it has not been possible to conduct an assessment. Instead, the available raw data is presented. In 2023, population size is only available from winter counts on Islay, the most important wintering site in the UK, where 24,656 birds were counted in February. A total of 1,627 Barnacle Geese were killed in Scotland and Iceland. Derogation shooting was suspended in Scotland during most of the season as the result of a significant AI outbreak. Until we receive all the data from the international census carried out in late February, it is not possible to estimate the impact of AI.

## Management recommendations for E Greenland/Scotland and Ireland population of Barnacle Goose

Due to the reasons stated above, it has not been possible to perform the assessment of offtake in 2023. Offtake scenarios including possible levels of avian influenza will be discussed in a coming Task Force meeting. Furthermore, coordination of offtake between UK and Iceland will be discussed as soon as Ireland submits flyway data and the results from the assessment are available. Finally, the impacts of AI will be considered in the coming assessments, including how this might impact on the Adaptive Flyway Management Programme (AFMP) and the agreed management activities.

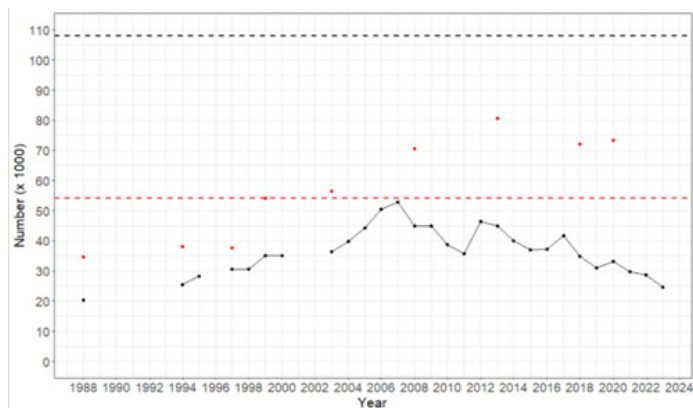


Figure 5. Development of the winter population size of the E Greenland/Scotland & Ireland Barnacle Goose (filled red) with additional annual winter counts from Islay the most important wintering site in the UK (black line). Black dashed line represents the 200% threshold, and red dashed line represents the FRP.





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## Relevant Links:

Population Report: [Population Status and Offtake Assessment Report 2023](#)

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