

AEWA EUROPEAN GOOSE MANAGEMENT PLATFORM



**WORKSHOP FOR THE REVISION OF THE INTERNATIONAL
SINGLE SPECIES MANAGEMENT PLAN
FOR THE SVALBARD POPULATION OF THE
PINK-FOOTED GOOSE**



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**MANAGING THE SVALBARD POPULATION OF PINK-FOOTED GOOSE¹:
A NOTE ON THE PROS AND CONS OF DEFINING MANAGEMENT UNITS**

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Cover note:

This document outlines the advantages and disadvantages of establishing Management Units for the Svalbard population of the Pink-footed Goose. Should the decision to establish Management Units be agreed upon, Annex 5 – Delineation of Management Units will be developed for inclusion in the revised plan.

¹Throughout this document the entire population, including Pink-footed Geese breeding on Novaya Zemlya, is termed the Svalbard population.

Background

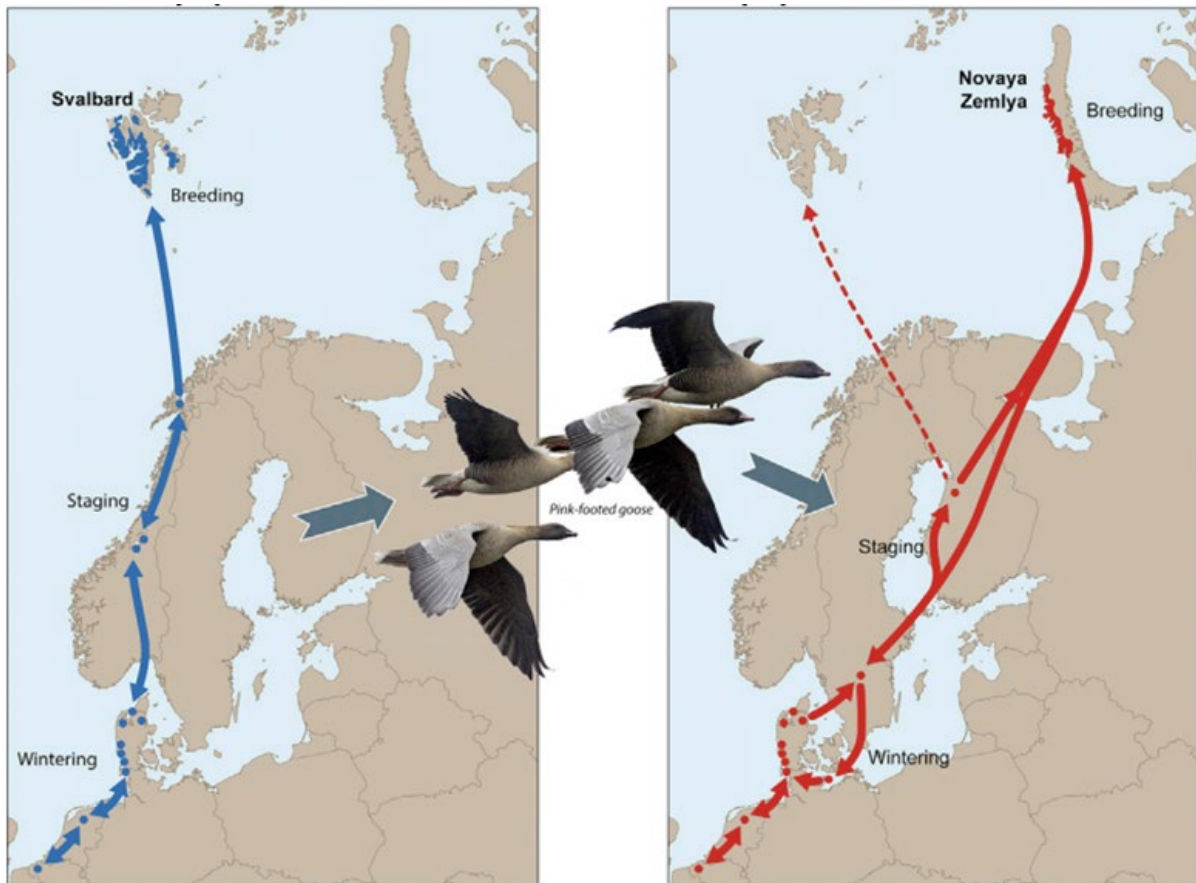
During the last two decades a new, distinct breeding area for Pink-footed Goose has been established in Novaya Zemlya, northern Russia. Although exchange of birds occurs regularly, and wintering areas are shared, breeding and most staging areas are only used by birds breeding on either Svalbard or Novaya Zemlya. This caused the EGMP Pink-footed Goose Task Force and the AEWA Technical Committee to discuss the future delineation of the Pink-footed Goose population, and whether the population should still be considered as one, in March 2024. It was agreed to adjust the delineation of the Svalbard population to include birds at both breeding sites.

This means that Finland, Sweden, and Russia are considered primary range states of the population along with Norway, Denmark, The Netherlands and Belgium. Finland and Sweden have agreed to formally join as parties to the revised PFG ISSMP.

During the revision process, a set of Favourable Reference Values (FRVs) for the population should be determined by the range states. A precondition for setting FRVs is knowing at what level the population will be managed, thus in this case considering carefully whether there is a practical need for managing the breeding groups on Svalbard and Novaya Zemlya differently. This must be agreed on by all range states, preferably with input from relevant stakeholders, not least since FRVs were not formally defined for the existing ISSMP.

Aware that a discussion and decision on the revised management objectives has not yet taken place, this note is produced to facilitate a simultaneous discussion on these matters by summarizing the general pros and cons of establishing Management Units (MUs) for managing the population under the EGMP. Similar considerations were presented in Annex 5 of the ISSMP for the Greylag Goose (Powolny *et al.* 2018) and Annex 5 of the ISSMP for the Barnacle Goose (Jensen *et al.* 2018).

Note that the management objectives for the Svalbard population must be established and considered in detail prior to a final evaluation of the relevance of establishing MUs and managing the population at MU level.



The traditional migration route for Svalbard-breeding Pink-footed Geese (left) overlaps with the migration route used by the birds breeding on Novaya Zemlya (right). All birds share wintering areas and are considered as one population (figure from Madsen et al. 2023, *Current Biology*).

Establishing Management Units for the Pink-footed Goose

General considerations

Under the EGMP, MUs have been defined for both the NW/SW European population of Greylag Goose (two MUs) and the Russia/Germany & Netherlands Population of Barnacle Goose (three MUs) on the request of the Range States to reflect different management objectives within these populations. In both cases, FRVs for the wintering season have been determined for the entire population of each species while FRVs for the breeding season have been determined for each MU. Similarly, if managing the Svalbard & Novaya Zemlya population as (two) separate MUs is recommended, range states will be required to define joint FRVs (for the entire population) for the wintering season, as well as breeding season FRVs for each MU.

It has not previously been considered to manage the Svalbard breeding population of Pink-footed Goose at MU level, as all agreed management objectives of the existing ISSMP pertain to the entire population. However, the distance between the traditional breeding range and the newly established breeding area on Novaya Zemlya, and the difference in number of breeding pairs at the two sites, has prompted the discussion in relation to the current revision of the ISSMP.

Currently, breeding numbers on Svalbard have stabilized at ~75,000 individuals while breeding numbers on Novaya Zemlya (at least 4,000 individuals) appear to continue to increase (Madsen *et al.* 2023, Johnson *et al.* 2024). The net emigration from Svalbard to Novaya Zemlya is likely to continue.

Harvest management and conservation implications

Pink-footed Goose is currently huntable in Norway and Denmark, where harvest levels have increased over the past decade as part of the agreed management efforts. As Pink-footed Goose is protected in Finland and Sweden by the EU Birds Directive, hunting of the Svalbard population will be limited to Russia (current conservation status and harvest level unknown), Norway and Denmark. Should the population be split into MUs with different management objectives, it might be necessary to introduce temporally and/or geographically restricted local hunting seasons in Denmark, where individuals from both breeding areas are present during the current open season.

Currently, the Novaya Zemlya breeding group appears to grow exponentially, despite some harvest taking place in Denmark (in December and January). This suggests that current harvest does not constitute a threat to the group. Should the harvest rate on the Novaya Zemlya group increase, it might be reflected in the numbers staging in Finland and Sweden in autumn and spring (although to some degree blurred by geese with mixed migration routes). The rate of change in numbers occurring in Finland and Sweden can be used as a factor to guide the adaptive harvest decision process, but how to specifically do this will require considerations in the forthcoming Adaptive Harvest Management Programme to be developed under the revised ISSMP.

Whether the population is split into MUs or not, possible conservation actions to maintain habitats and sites throughout the range must be considered, even though anticipated continued global warming is expected to benefit breeding performance on Svalbard as well as Novaya Zemlya, thus contributing to continued growth.

Monitoring implications

In general, managing populations at MU level increases the complexity and the necessary level of detail in the available data. Should the Svalbard population of Pink-footed Goose be managed at MU level, an increased level of monitoring will become necessary, particularly with regards to demographic variables at MU level. This will incur a need for extra resources, particularly to monitor the Novaya Zemlya breeding birds.

In this case, the complexity increases further due to the emigration and immigration between the two groups. Regardless of whether the population is split into MUs or not, maintaining a GPS-tagging program to understand and monitor the rate of exchange between the two breeding groups and the development of migration routes would be recommended. In recent years, we have observed use of new stopover sites, expansion of the winter range, Svalbard geese migrating via Sweden and Finland and, *vice versa*, Novaya Zemlya geese migrating via Norway. Tagging would also be an important means to remotely estimate the size, breeding propensity and distribution of the Novaya Zemlya breeding group, which is difficult to obtain otherwise.

Furthermore, an internationally coordinated capture-mark-recapture (CMR) program can provide estimates of the proportion of geese from each MU present in the range states at the time of population monitoring, as well as data to estimate annual survival.

Summary

Even though the Novaya Zemlya breeding group is relatively small, there is no imminent threat to the group calling for targeted conservation actions. The exchange between the two groups is ongoing. Splitting into MUs at this moment may lead to untimely restrictions and even suspension of hunting of the Svalbard breeding group, most likely causing the population to increase (see document AEWA/PfG/ISSMP/1.8). It will also require substantial changes to the harvest management system in Denmark where the two groups overlap in winter.

Splitting into MUs will require additional monitoring of demographic variables, including survival, productivity, exchange of individuals as well as estimation of MU population sizes (using a combination of counts, CMR and GPS-tagging). Regardless of the decision on MUs, it would be useful to maintain a GPS-tagging program to understand and monitor rates of exchange and development of migration routes.

References

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