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## Workshop for the Revision of Pink-footed Goose ISSMP

*FRVs for Pink-footed Goose/Favourable Reference Population Size*

*Presenter: Jesper Madsen*

7-8 October 2024 | Levanger, Norway



# AEWA European Goose Management Platform

## Considerations

1. The Favourable Reference Population should be a viable component of its ecosystem in the long-term



Pink-footed Geese are important prey of Arctic Foxes and play a key role in terrestrial food webs in Svalbard, in the past and at present

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### 1. The Favourable Reference Population should be a viable component of its ecosystem in the long-term



Pink-footed Geese exert an increasing effect on Arctic terrestrial ecosystems in Svalbard by grubbing, which has been observed to increase since the early 2000s

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Pink-footed Geese traditionally mainly foraged on extensive grasslands, but made a transition to fertilised grasslands and agricultural crops in the course of the 20th century.

Conflicts with agriculture intensified in the 1980s due to increasing foraging on new-sown cereal (Denmark)

Conflicts exacerbated in the 1990s in Norway, partly due to the growing population, partly due to shift of spring staging range

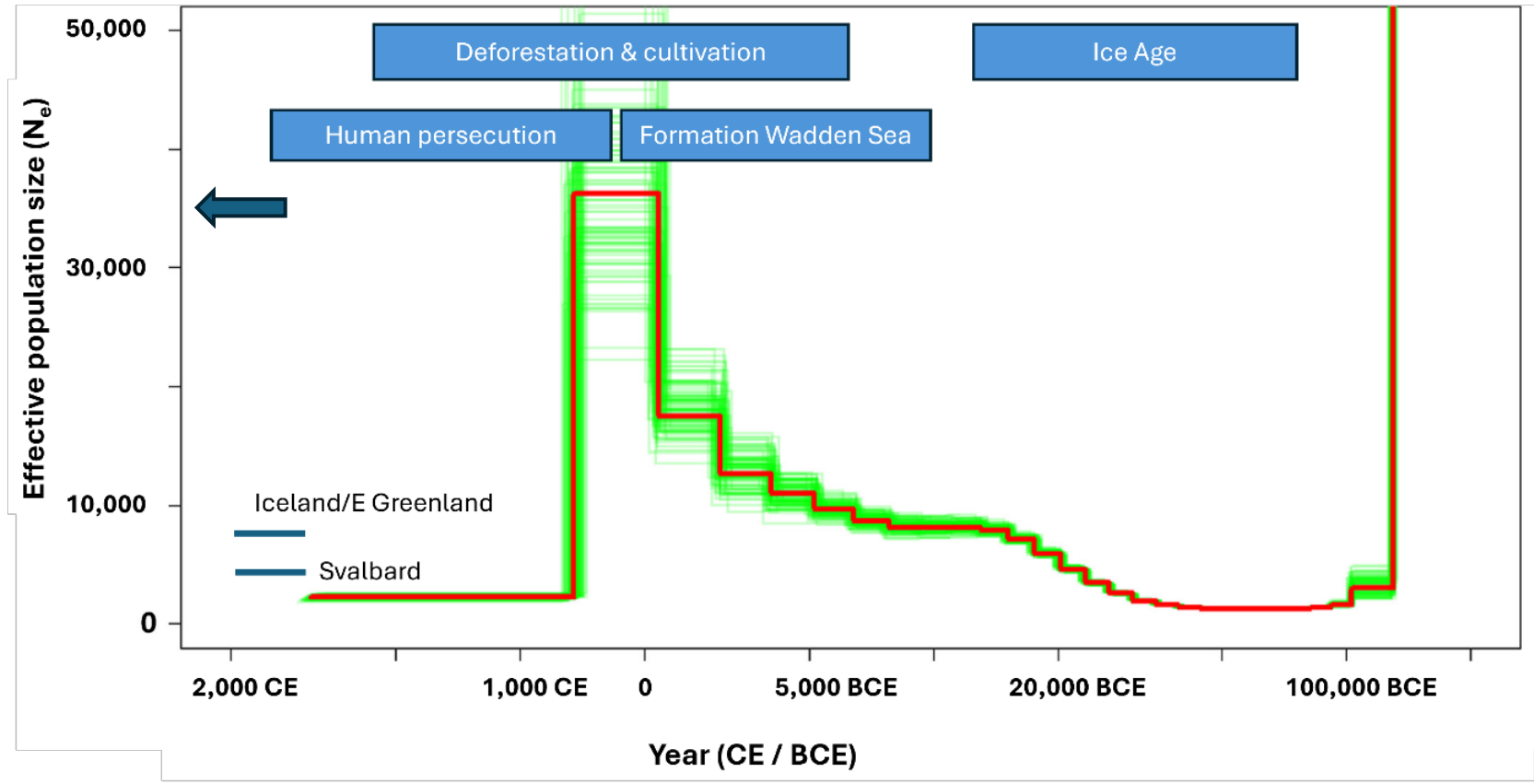
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2. Abundance should approach historic levels as far as it is feasible and consistent with wise wildlife management

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## Demographic, genomic reconstruction of population size



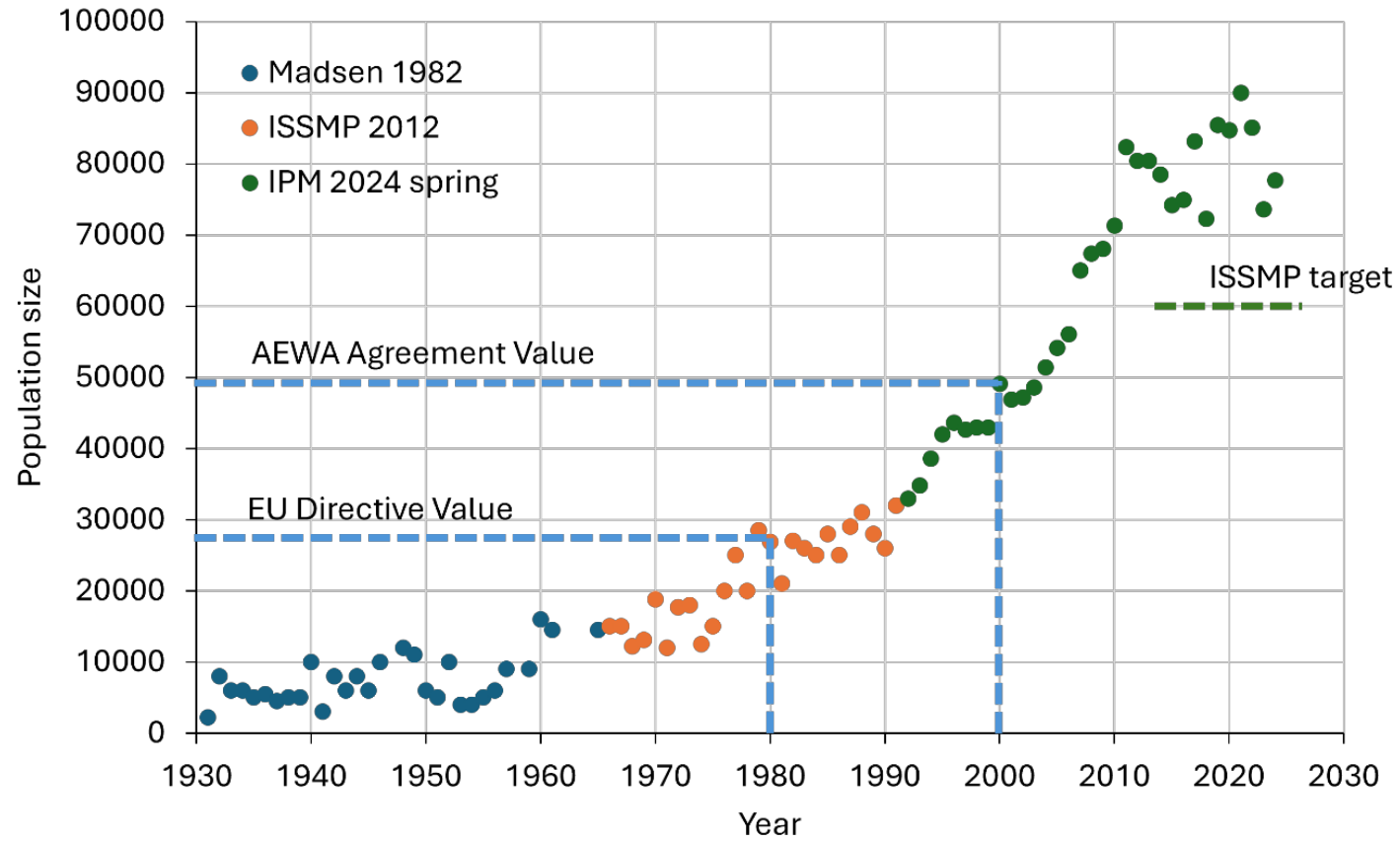
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3. The Favourable Reference Population should be at least the size when the EU Directive came into force. In previous determinations of FRPs under AEWA it was similarly agreed that, in principle, the FRP should be at least the size when the Agreement came into force

# Population development since the 1930s

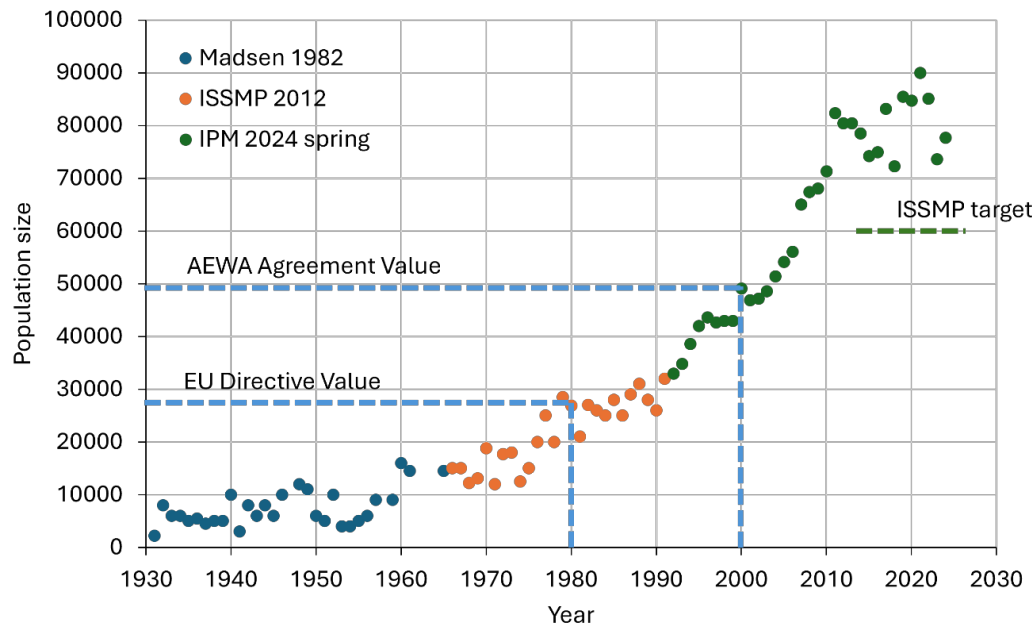




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4. FRVs do not automatically correspond to the ‘potential values’ such as carrying capacity, but these should be used to understand restoration opportunities and constraints



*The population has not reached carrying capacity; the population is on purpose maintained at a stable level; above the population target agreed in the ISSMP.*

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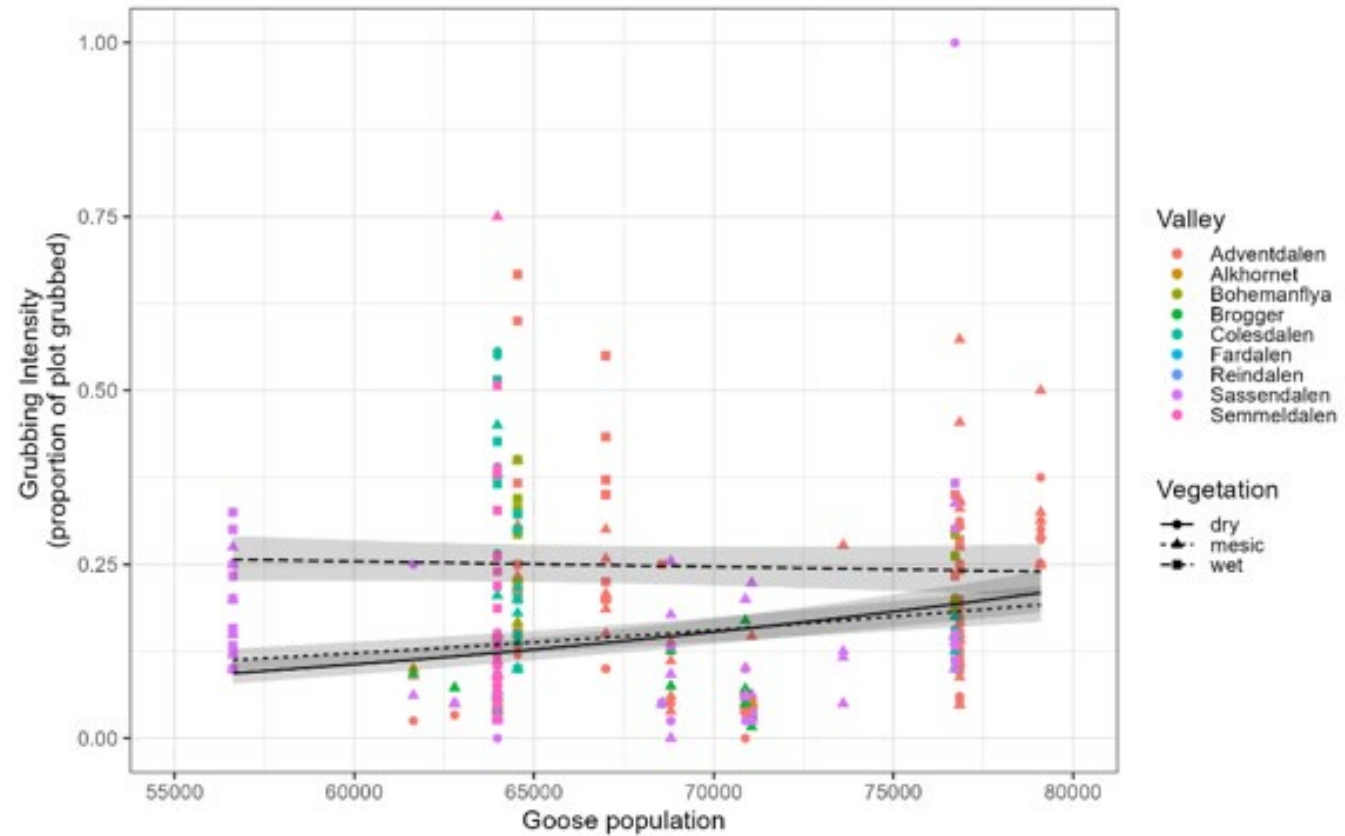
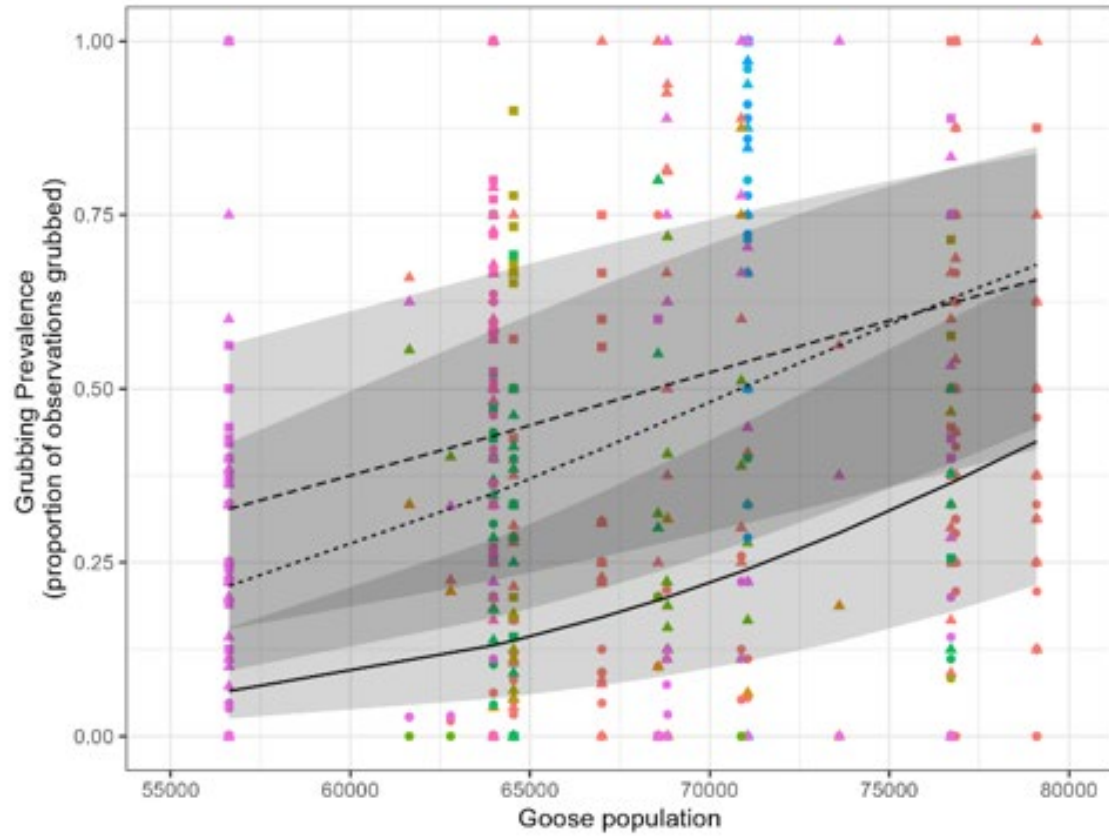
5. The Favourable Reference Population size should be equal to the current population size except for populations that are secure and have triggered human-wildlife conflict. In that case the FRP should be lower than the Current Value.

*The population of the Pink-footed Goose is subject to an ISSMP with the purpose to reduce human-wildlife conflicts and ecosystem impacts; in this case it is therefore an option to define the FRP below the current population level.*

# Population reference values

Historic known value (1930s)	8,000
EU Birds Directive value (1980)	27,000
AEWA Agreement value (2000)	49,000
ISSMP Target (2013)	60,000 ( $\pm 10,000$ )
Current value (spring 2024)	78,000

# Relationship between goose abundance and grazing effects (grubbing) on Arctic tundra, Svalbard



Source: Ravolainen et al. 2024, in prep.