Managing goose populations: 
the flyway approach 
and the African-Eurasian Waterbird Agreement (AEWA)

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Presentation overview

- Pink-footed Goose management
- Other goose management processes
- European Goose Management Platform
AEWA goose species

8 species, 24 populations = 5.2-5.7m birds
Agriculture damage compensations
But increasing goose numbers are not just about agricultural conflict

Proceedings of a meeting held in Gram Slot, Denmark October 2015, to be published in *Ambio* in 2017
North American Lesser Snow Goose population size and trends

Lincoln's population estimate, 95% CI(N)

Conservation order


AHY

HY
AEWA Strategic Plan 2009-2017

Target 2.5

“Adaptive harvest management of quarry populations is ensured at international level.”

Indicator

“International harvest management plans for two quarry populations are developed and implemented”
The first European trial of adaptive management of a migratory population
PfG – two discrete populations
A well-defined flyway with few range states
The graph shows the population size of a species over time. Key factors influencing the population include protection measures in the Netherlands and Belgium, improved winter food conditions, and global warming.

- **Protection Netherlands:** Indicates the period when protection measures were implemented in the Netherlands, leading to an increase in population size.
- **Protection Belgium:** Shows the protection measures in Belgium, which also contributed to population growth.
- **Improved winter food conditions:** These factors have been crucial in maintaining a steady increase in population size.
- **Global warming:** An upward trend in the graph, particularly after 2000, suggests a correlation with global warming, which has likely had a positive impact on population growth.

The data spans from 1965 to 2010, with a significant increase observed in the late 2000s.
Internationally co-ordinated long-term studies

- Population monitoring
- Hunting bag statistics
- Capture-recapture study
- Year-round studies
- Experimental work
- Population modeling
- Individual based modeling
Conflicts with agricultural interests
Signs of grazing impacts on tundra vegetation
The Flyway Plan process and timeline

- Initial workshop, Nov. 2010
- First draft Plan, Mar. 2011
- Consultation range states, spring 2011
- AEWA consultations, autumn 2011
- AEWA MOP5 endorsement, May 2012
- Implementation workshop, Aug. 2012
- Working Group est., Nov. 2012
- AHM starts, autumn 2013
- Revision 2022
PfG management framework: goal and objectives

Maintain favourable population status at flyway level while taking into account biodiversity, economic and recreational interests

- Maintain population range and ecological integrity
  - Improve habitat management
  - Optimise compensation and subsidy systems
  - Increase information

- Minimize agricultural conflicts
  - Improve recreational values of geese
  - Increase goose tourism
  - Increase hunting opportunities

- Increase habitats where geese make no damage
  - Increase habitats
  - Respect grasslands

- Maintain sustainable and stable population
  - Maintain a population of around 60,000 individuals
  - Avoid increase in tundra vegetation degradation
  - Adapt and optimise harvest regulations and practices

- Minimise crippling of birds due to hunting
  - Allow recreational use not jeopardizing social acceptability
  - Minimise crippling of birds due to hunting

- Decrease disturbance
Setting a population target

A social construct achieving ‘least mutual dissatisfaction’

Upper target: Reduce damage (agriculture and tundra)

Population target

Lower target: Safety net under the population
Predicted population trajectory with stable harvest (11,300 per annum)
Predicted population trajectory with increased harvest (15,000 per annum)

Desire to reach target faster led to a recommendation of an extension of the season length in Denmark into January starting 2014/15.
Recent developments

- Population size
  - Harvest Norway
  - Harvest Denmark
  - Population size

- Effect of January extension
- January extension rolled back
Crippling – a critical issue
Monitored by X-ray in conjunction with goose catches (canon-netting)
Crippling rate
Agreed objective: continued decline

Taking the increasing harvest rate into account the decline in crippling rate represents a 5-fold improvement in performance.
A few lessons learned.....

- Patience: it takes time to set up international adaptive management, tune the operation and test actions
- Be careful with problem framing and objectives
- Commitment and transparency are essential
- Stakeholder engagement => trust-building, ownership
- Process shall be nationally and locally anchored
- Understanding of hunters’ behaviour and motivations
- Clear communication and lines of command
- Need for reliable data on population size and harvest
AEWA Taiga Bean Goose Action Plan

Long-term decline (100,000 in the 1990s to 50,000-60,000 nowadays)

Action planning launched in November 2013; AP approved in November 2015

Adaptive management scheme was developed in 2016 and is up for discussion and adoption at this meeting

Photo: Magnus Elander
Greylag Goose management

November 2014 – French Minister of Ecology and Sustainable Development proposed the development of a GG ISMP

Funding support was pledged and other Range States seconded the initiative

March 2015 – the issue was discussed at the 12th meeting of the AEWA Technical Committee

Photo: Sergey Dereliev
Goose Management: Challenges 2015
International Conference, Gram Slot, Denmark, 27-29 October 2015
Organised by Aarhus University and the National Nature Agency, Denmark
Goose Management: Challenges 2015

- Proceedings expected in February 2017
  *(Ambio, Volume 46, Supplement 2)*
European Goose Management Platform

Mandate

- Resolution 6.4: “Requests the Secretariat to facilitate, funding permitting, the establishment of an European multispecies goose management platform and process to address sustainable use of goose populations and to provide for the resolution of human-goose conflicts, targeting as a matter of priority Barnacle and Greylag Geese populations for which management plans are yet to be developed as well as the Svalbard population of the Pink-footed Goose and the Taiga Bean Goose for which plans are already in place, and invites interested Parties, Range States and other stakeholders to take pro-active role in this initiative, including to ensure necessary resources for the maintenance and the functioning of the platform.”
European Goose Management Platform

Paris negotiation meeting (May 2016) – confirmation of commitment and agreement on modalities (Paris Declaration)
Populations to be included for a start

- Pink-footed Goose, Svalbard population; ISMP implemented since 2012
- Taiga Bean Goose; ISAP endorsed at AEWA MOP6, November 2015
- Barnacle Goose, 3 populations
- Greylag Goose, North-west European population
Goose Symposium, Fryske Akademy, Leeuwarden, The Netherlands 19 May 2017

Barnacle Goose populations (population size data from AEWA CSR6, 2015)

- **38,100 ind**
- **80,700 ind**
- **1,000,000 ind**
Greylag Goose populations (population size data from AEWA CSR6, 2015)
EGMP goal

Provide the *mechanism for a structured, coordinated and inclusive decision-making and implementation process for the sustainable management of goose populations in Europe, with the objective of maintaining them in a favourable conservation status, while taking into account concerns of relevant stakeholders and the pertinent legislative frameworks and regulations.*
AEWA International Working Group

(Range state reps, EU, stakeholders)

*Management framework, Prioritisation, Recommendation, Knowledge exchange*

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Specific concerted actions

Data centre and assessment

→ data → assessment → recommendation
EGMP

Annual iterative process
EGMP

Goose pops and timelines 2016-2018

- Pink-footed Goose (1) • Implementation
- Taiga Bean Goose (1) • AHMP • Implementation
- Barnacle Goose (2/3) • SMP • AHMP
- Greylag Goose (1) • SMP • AHMP
# EGMP range states

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<th>Population</th>
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<tr>
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Post-AEWA MOP6 activities

1\textsuperscript{st} AEWA EGM IWG took place (14-16 Dec 2016, Kristianstad, Sweden)

2\textsuperscript{nd} AEWA EGM IWG forthcoming (15-16 Jun 2017, Copenhagen, Denmark)

Barnacle Goose Management Plan: International Planning Workshop (12-14 Jun 2017, Copenhagen, Denmark)

Greylag Goose Management Plan: International Planning Workshop, autumn 2017

Photo: Jari Peltomäki