



# Stop flying blind

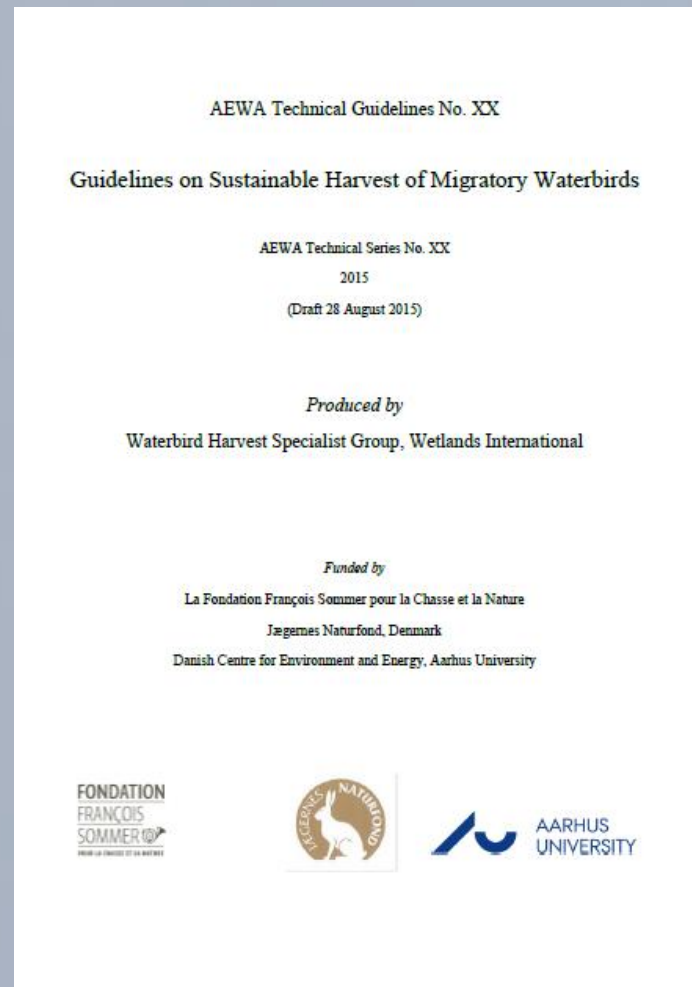
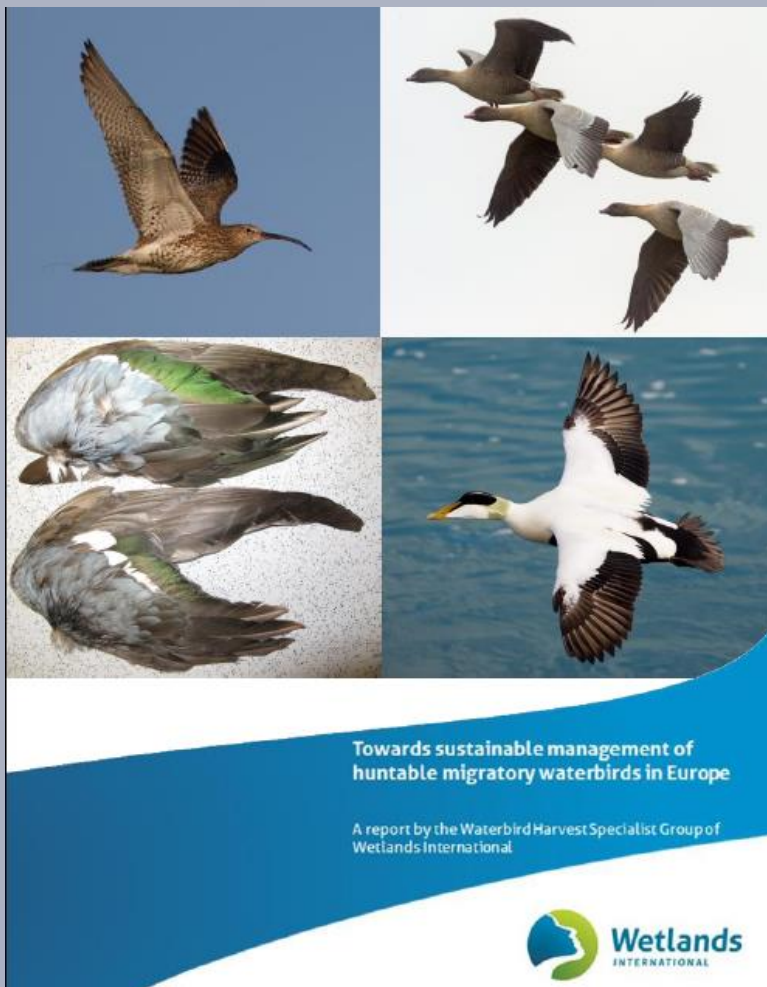
– the need for better data coordination to support the sustainable management of migratory waterbirds in Europe

**Jesper Madsen**

Aarhus University  
Department of Bioscience / Danish Centre for Environment and Energy

On behalf of the Waterbird Harvest Specialist Group of  
Wetlands International







# What's the problem? Status of huntable waterbirds in the EU (Annex II species)

## EU Birds Directive

## African-Eurasian Waterbird Agreement

- Total of 50 species

- Corresponds to 83 populations



1 pop Column A

41 pops Column B

35 (42%) declining

27 (32%) stable/uncertain

21 (25%) increasing





# Principles of sustainable exploitation

- Sustainable harvesting depends on:
  - Management objectives that are congruent with the renewal capacity of the resource
  - Ability to effectively regulate harvest
  - Understanding of the biological system
  - Understanding of responses to intrinsic (density dependent) and extrinsic (environment, harvest) factors



## Biological minimum information requirements to ensure sustainability of harvest:

- Population delineation – research projects / IWC
- Population estimate - IWC
- Population growth rate – research projects / IWC
- Form of density dependence – research projects
- Levels of harvest – Individual Member States

Additional useful information: demographic data on survival and reproduction



# Problems with data collection, geographic coverage, flow, synthesis

- Geographical coverage
  - Maintenance of waterbird observation networks
  - Climate change driven changes in waterbird distributions
  - Capacity to collect harvest information
- Flow and synthesis
  - Lack of centralised facility
  - Speed of processing, nationally, internationally



As long as we do not have this information we will keep flying blind







## We can do better...!

- Adaptive harvest management framework
- Flyway level coordination and assessment
  - there's a lot of data out there!
  - increase use of modern technologies



## *My Hunt – personal harvest diary with multiple benefits for hunters and wildlife administration*

**Oma riista**

OMAT TIEDOT RIISTALOKI LUVAT

OMA LOKI MUILE KIRJAAMANI

**13.9.2014**

**12.9.2014**

**SYYSKUU**

- Pyy 13.09.2014 16:42
- Pyy 12.09.2014 17:36

**HELMIKUU**

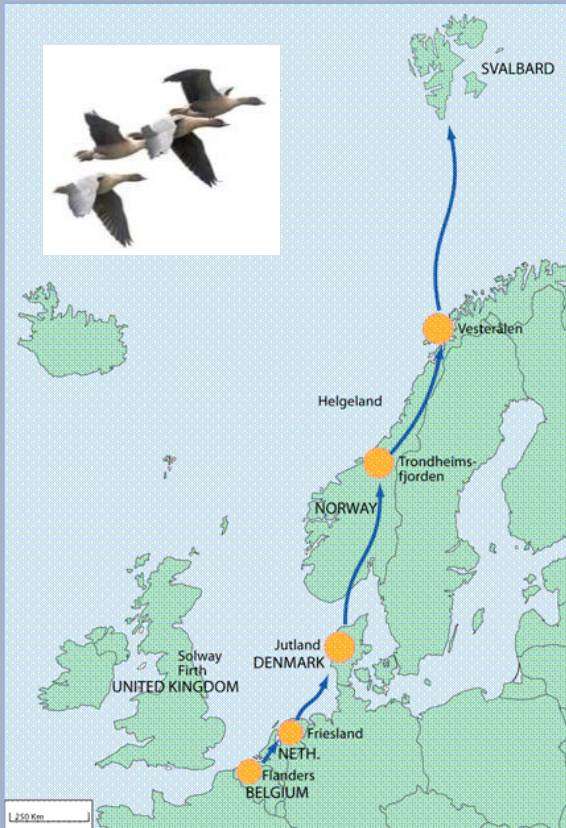
- heinsorsa 11.02.2014 18:00

**2013 SYYSKUU**

- heinsorsa 28.09.2013 18:26
- heinsorsa 25.09.2013 18:05



# First European adaptive management plan for a migratory waterbird: the Svalbard pink-footed goose



TECHNICAL SERIES No.48



International Species Management Plan  
for the Svalbard Population of the  
Pink-footed Goose

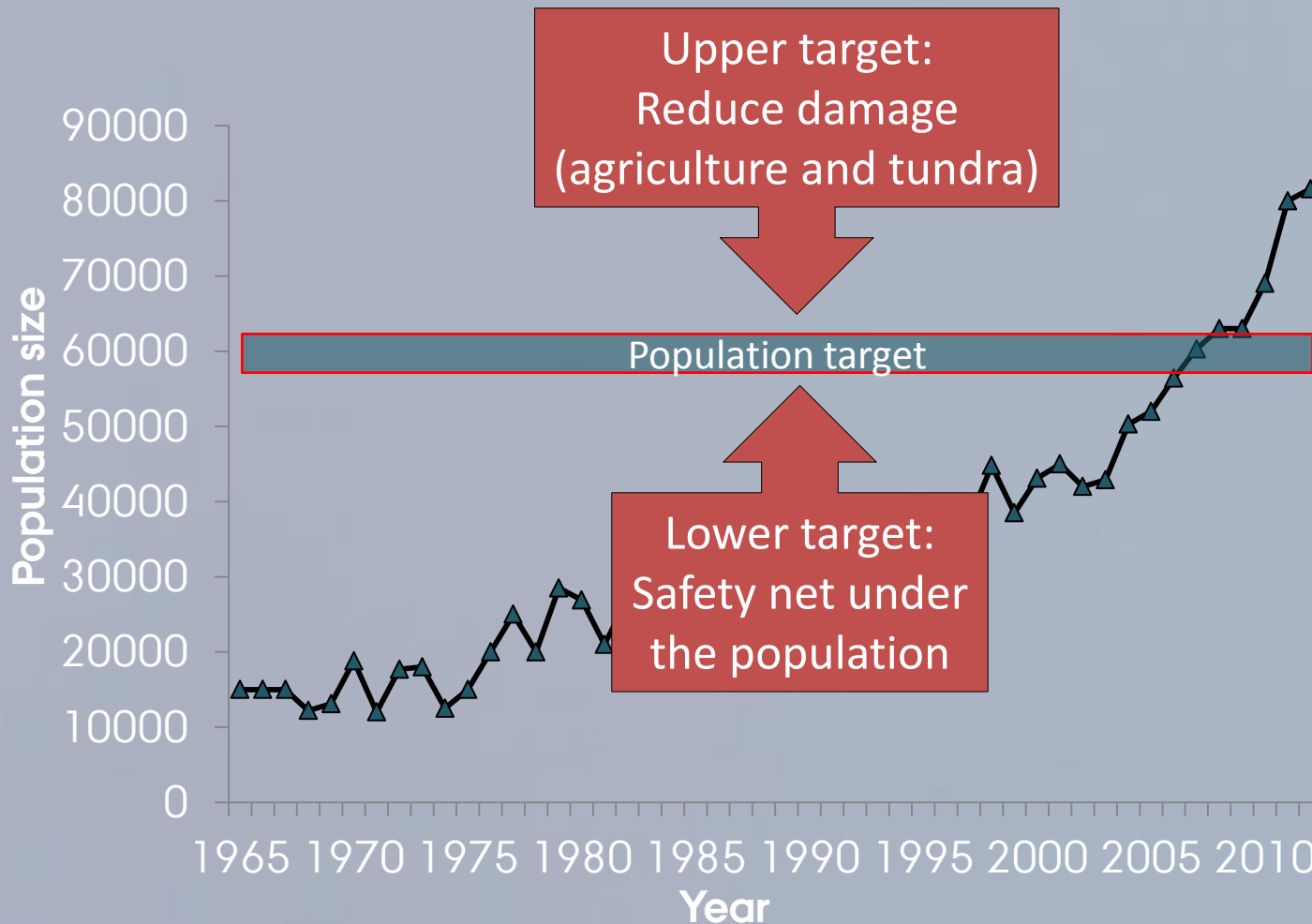
*Anser brachyrhynchus*



AEWA  
Pink-footed Goose  
International Working Group



# Setting a population target: A way to distill multiple objectives



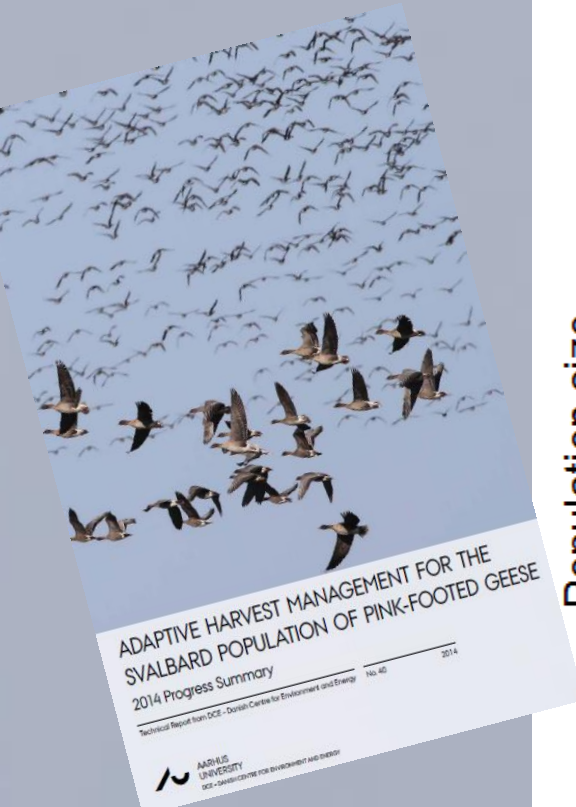
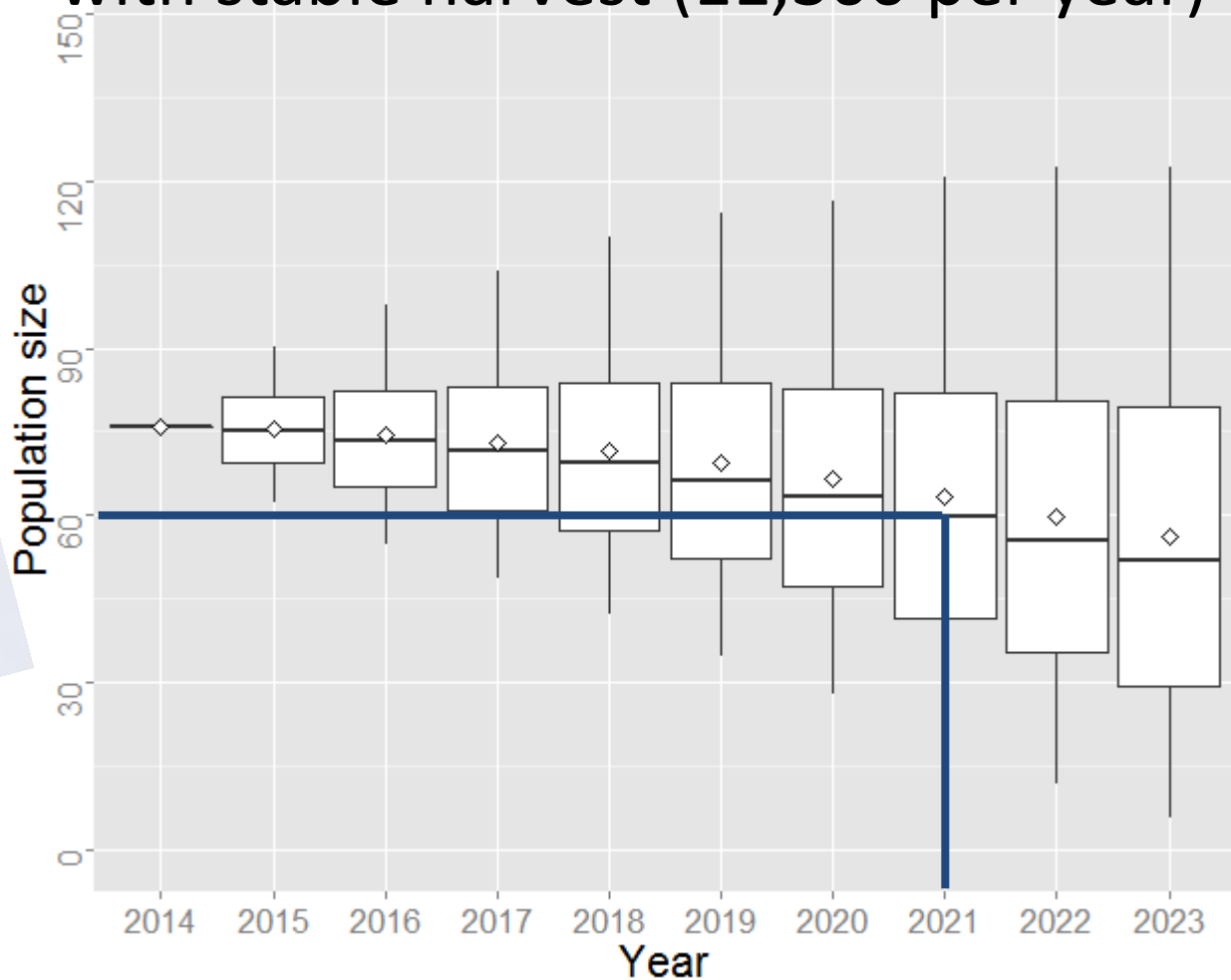


# Annual routines in adaptive harvest management - tuning monitoring to fit the purpose





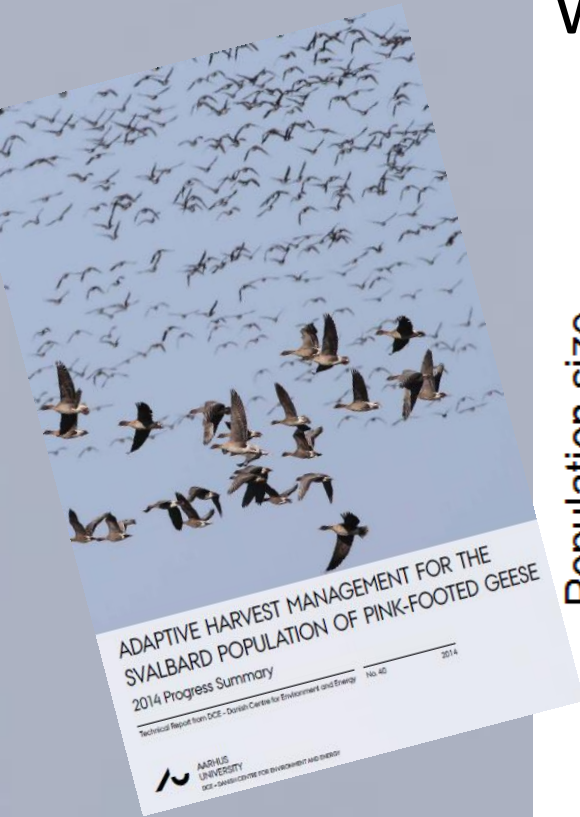
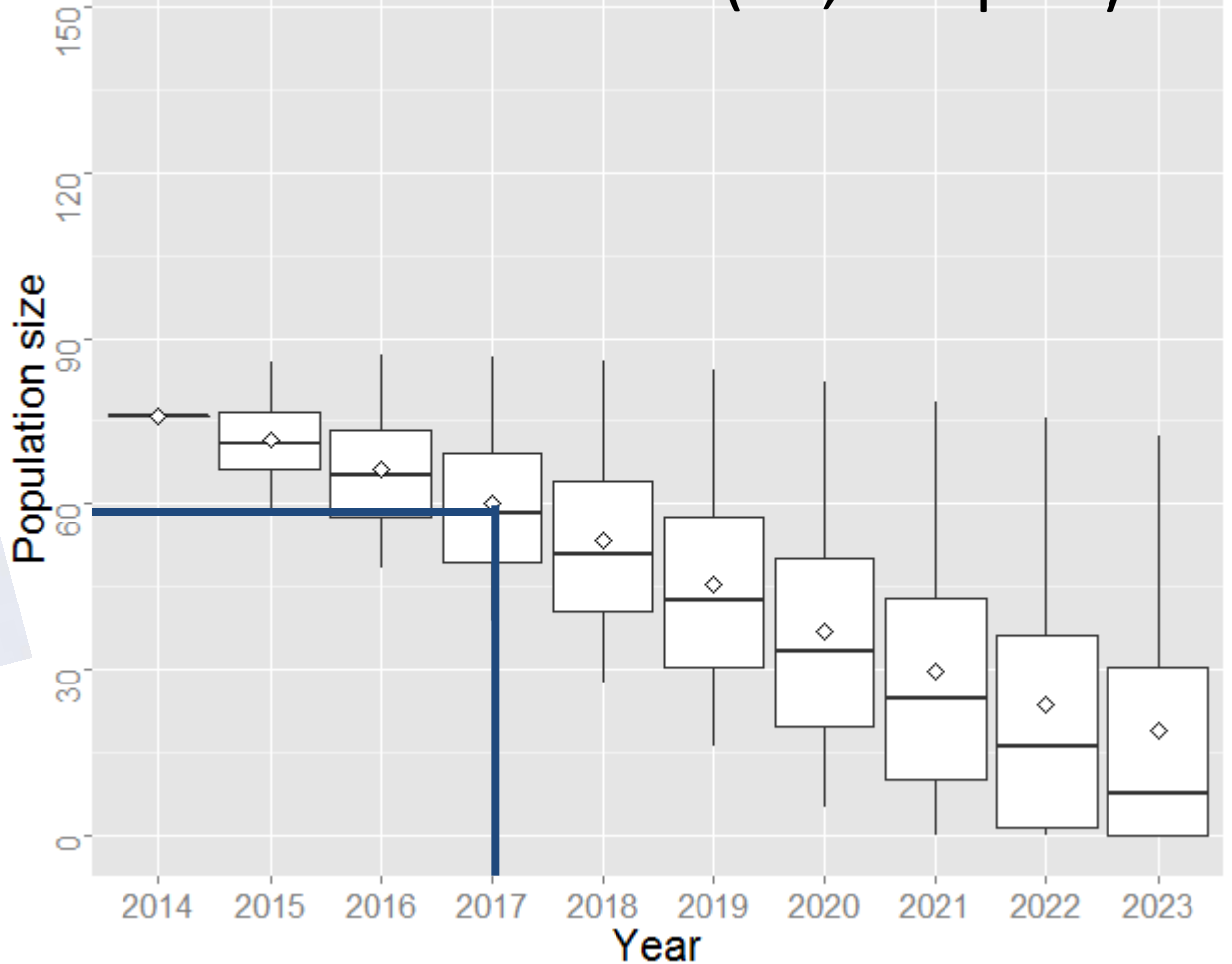
## Predicted population trajectory with stable harvest (11,300 per year)





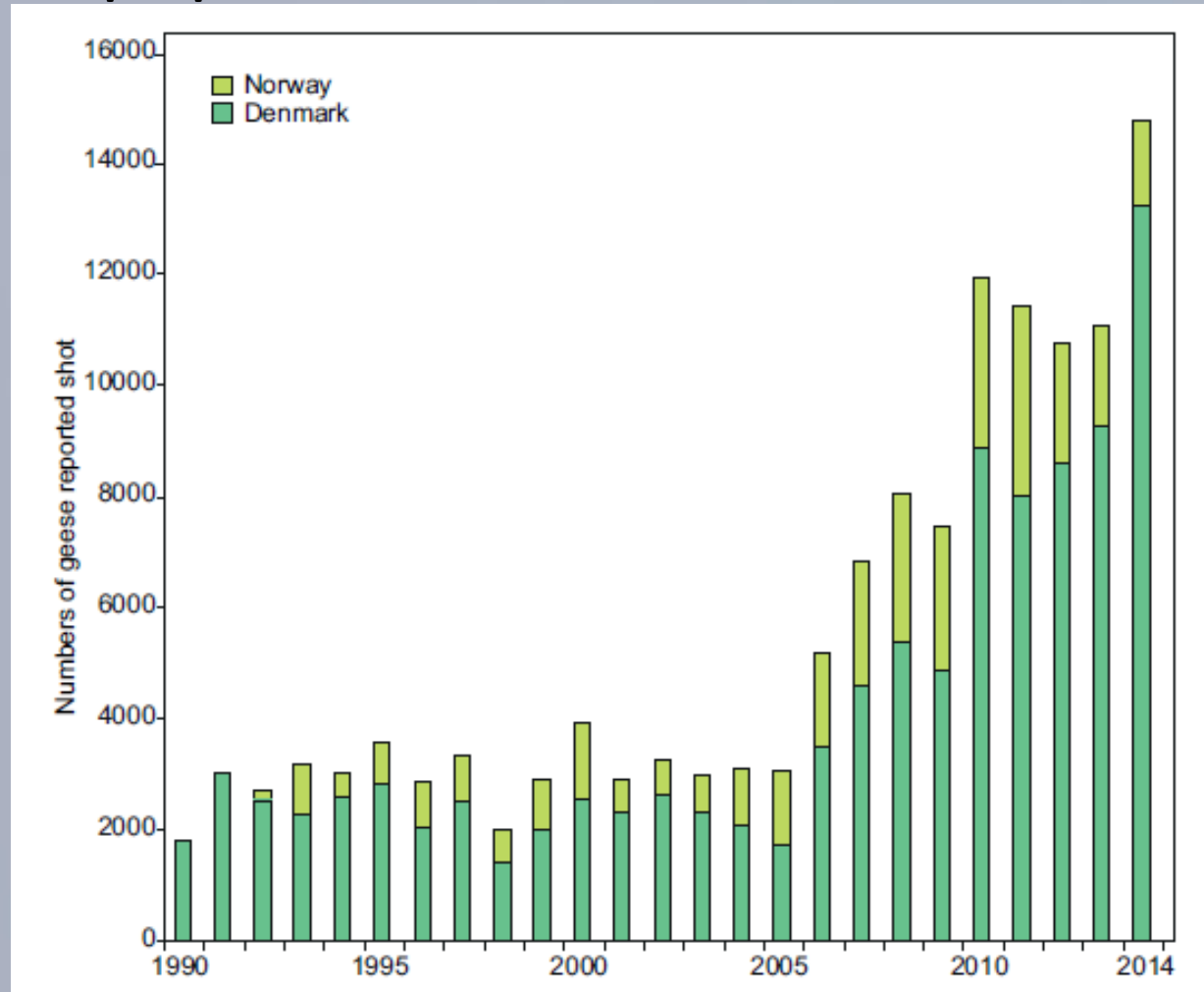
## Predicted population trajectory

with increased harvest (15,000 per year)





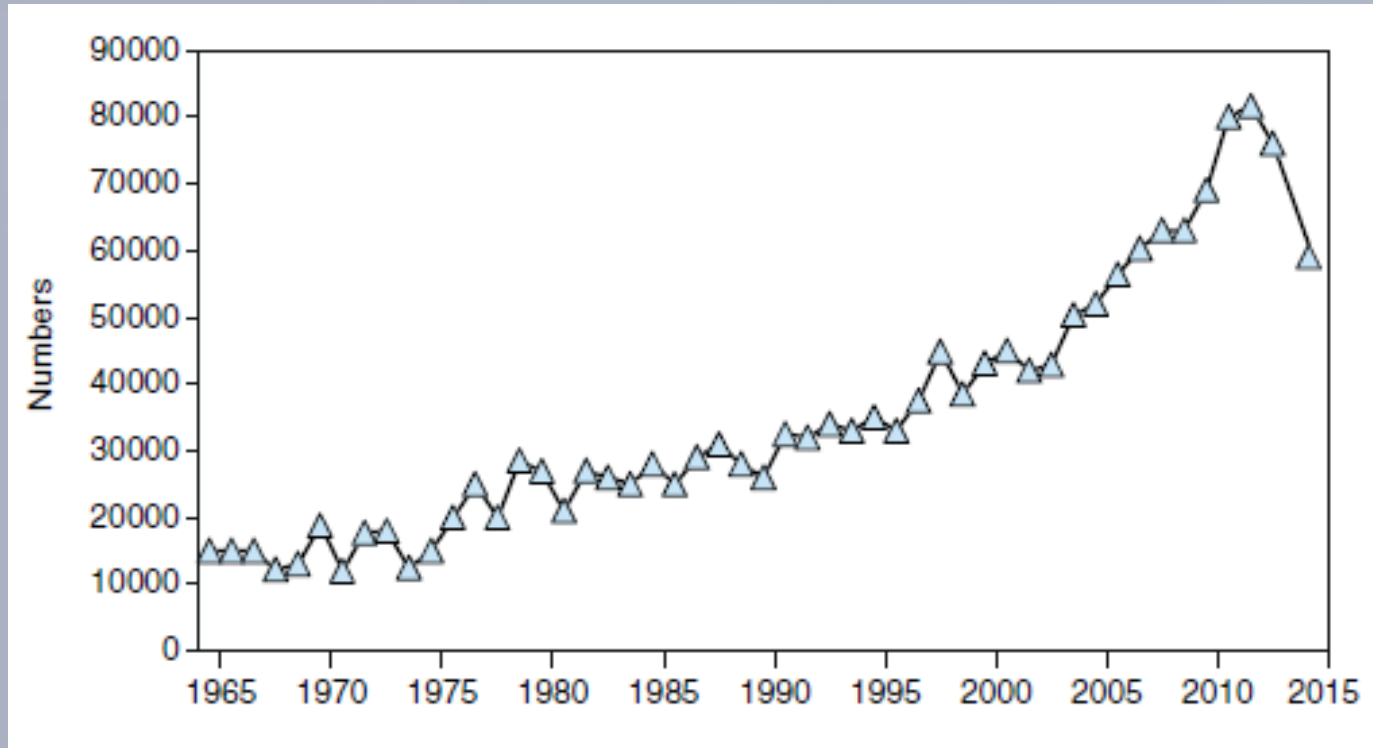
# Status of the Svalbard pinkfoot population 2014/15 – Harvest





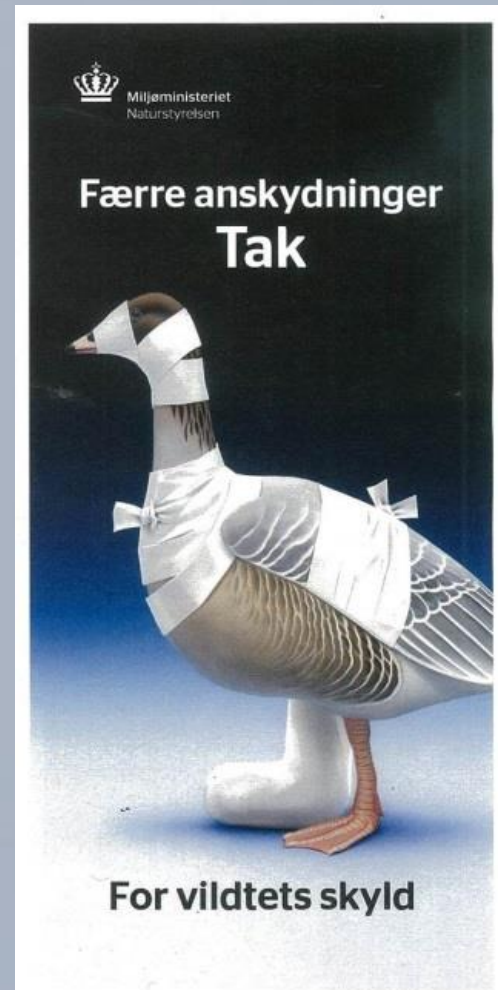


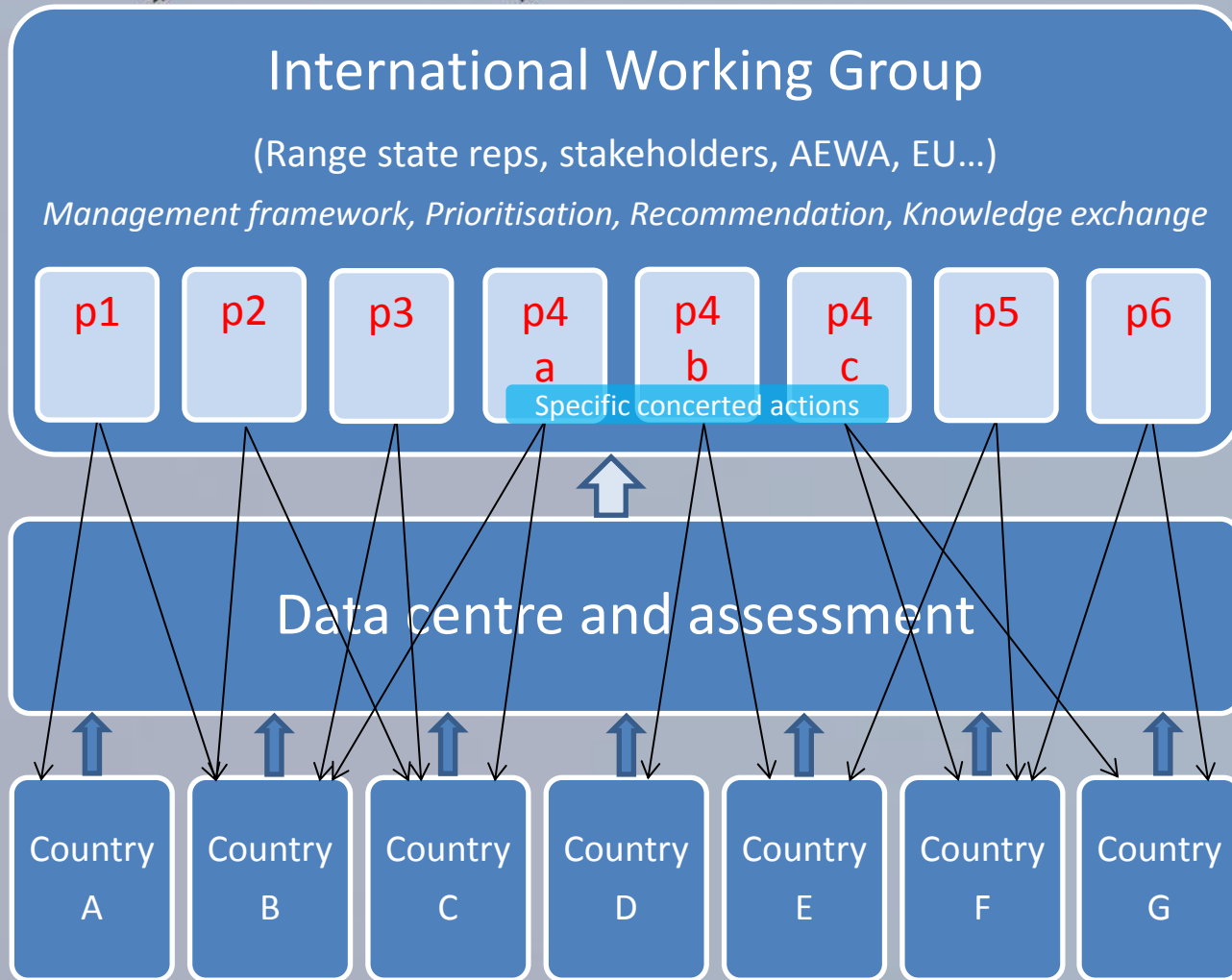
# Status of the Svalbard pinkfoot population 2014/15 – population size





# Plan process leads to engagement





data



assessment



recommendation