

Responses of wintering geese to the designation of goose foraging areas in The Netherlands and implications for cost-effectiveness

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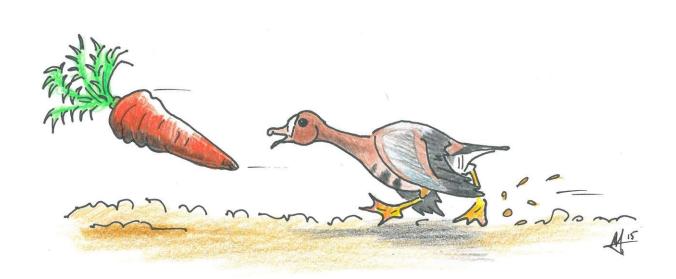
Webinar EGMP Task Force Agriculture

How to manage agricultural damage and conflicts

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How it got started





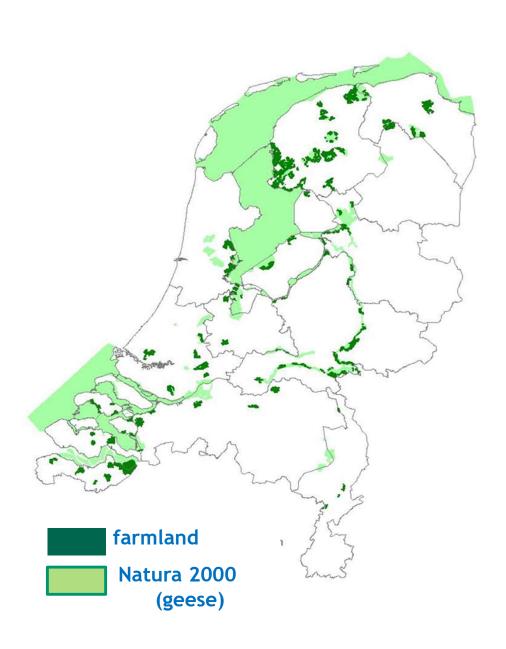
2005/06 - 2013/14:

Main aim (initially): accommodate geese in specific areas and disturb them (incl. lethal scaring/derogations) outside those areas. In addition: safeguard favourable conservation status of species affected.

→ Transfer from a system of only compensation payments for crop-damage into a more "durable" system with agri-environmental schemes and payments per hectare

Focus species by that time: Greater White-fronted Goose, Greylag Goose, (Barnacle Goose, Pink-footed Goose), Wigeon

Set-up of goose accommodation areas



 Σ 80.000 ha, consisting of:

65.000 ha (81 %) farmland - mainly grassland (arable only as supplementary pilots)

15.000 ha (19 %) grassland managed by nature conservation bodies

Size area from calculations of carrying capacity of grassland in NL (Ebbinge & van der Greft 2004, ~75.000 ha)

Quota per province from recorded goose distribution; mainly voluntary participation farmers

On top of that: nature reserves, e.g. salt marshes, regarded as accommodation area as well

How it was implemented

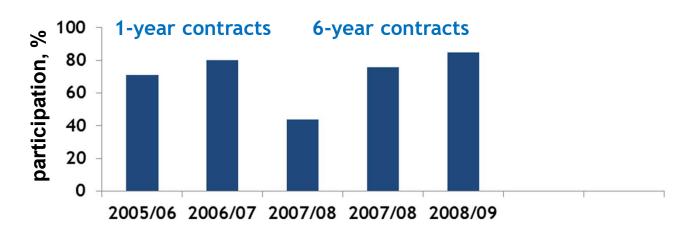
Agri-environment schemes:

6-year contracts

Fixed payment per hectare

but...

Implementation progressing slowly, never reaching full implementation



Compensation damage:

Initially not planned, but compromises:

Payment for farmers that had not agreed on AE-scheme, <u>inside</u> accommodation areas

Payment for farmers outside accommodation areas

→ issue with clear delineation of accommodation areas

→ issue with incentives

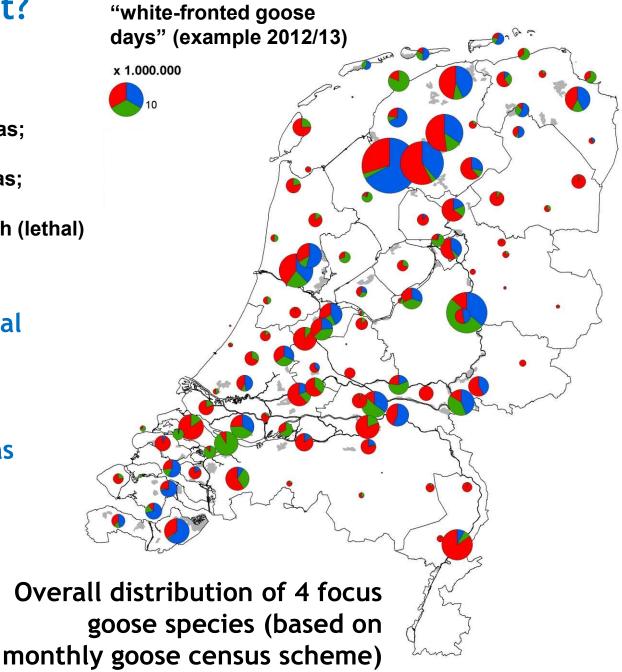
How did it work out?

Accommodation Areas;
farmland
Accommodation areas;
nature reserves
Regular farmland with (lethal)
scaring regimes

Example 2012/13, national scale:

267.000.000 WFG-days

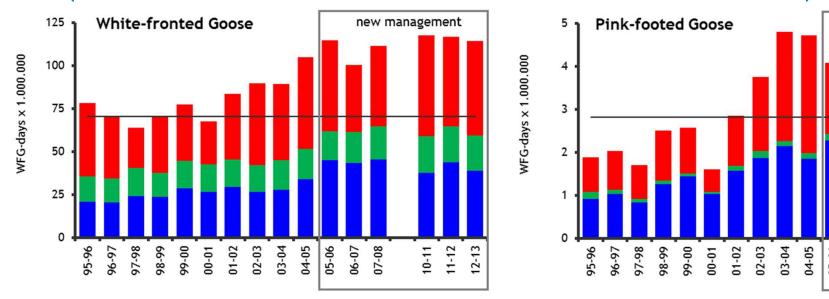
55% accommodation areas 45% regular farmland

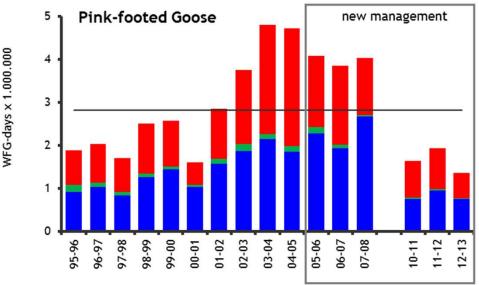


From: Koffijberg et al. 2017 Ambio

No significant trend in use of accommodation areas

(for WfG confirmed by analysis of distribution of neckbanded birds)





Legend as in previous slide - line denotes calculated capacity needed to accommodate geese

Species	1995/1996–2004/2005 Prop. ass.		2005/2006-2012/2013 Prop. ass.		Mapping				
							Trend		
	Mean	SD	Mean	SD	Mean	SD	%/year	SE	P
Pink-footed goose	54.8	6.8	43.6	7.0	55.6	7.0	-0.028	0.313	0.97
White-fronted goose	53.2	6.4	48.6	4.1	55.1	4.1	-0.003	0.312	1.00
Greylag goose	57.2	5.4	47.6	3.2	49.6	3.2	0.009	0.311	0.98
Barnacle goose	65.3	3.9	67.3	3.8	73.8	3.8	0.009	0.353	0.98
All 4 species	56.6	4.5	52.1	2.2	57.4	2.2	0.008	0.313	0.98

From: Koffijberg et al. 2017 Ambio

The initial aim did not quite work

- Still large number of geese outside accommodation areas
- No trend in time in use of accommodation areas
- No reduction in cost, as damage compensation and agrienvironmental schemes (payment/hectare) multiplied overall payments

Main conclusions



Mainly because:

- Implementation confounded and compromised by multiple factors slow progress implementation, irregularly shaped accommodation areas, uncoordinated scaring regimes (in combination with highly mobile geese), no optimal incentives for farmers
- from a goose perspective rather weak difference between accommodation areas and regular farmland with scaring

How it ended...



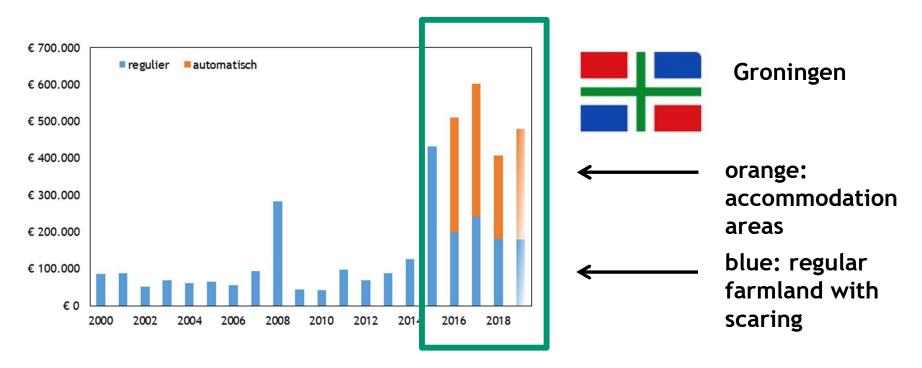
Transfer from management at national scale to provincial scale (12 provinces)



"12 provinces ~ 12 management regulations"

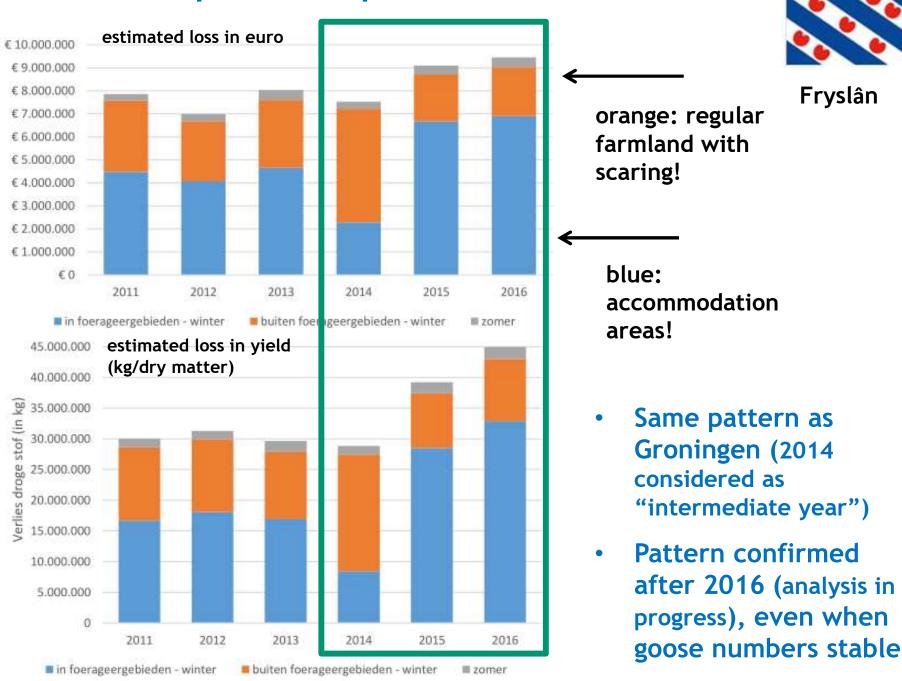
- 2005-2013 Experiment with goose accommodation areas was commonly considered not successful (but... some of it's basic considerations were also violated)
- Some provinces continued, mainly from a conservation perspective (balance conservation vs. disturbance and (lethal) scaring - usually set in multiple-year management plans
- Usually accommodation areas (much) smaller in size determined by financial constraints and not after calculated
 capacity for geese.
- Compensation payments continue, with small differences between the provinces (conditions, amount of payment).
 Sometimes different compensation payment regimes for inside and outside accommodation areas
- Currently: initiative to achieve more coordination among the provinces

Some examples from provincial evaluations



- Strong increase in compensation payments (euro) after new management scheme was introduced in 2014/15 (2015 considered "intermediate year")
- → In accommodation areas automatic estimates of damage (independ from if farmers claim damage). Outside: only estimates when farmer starts routine for damage-recording

Some examples from provincial evaluations



Lessons learned

- Introduction of goose accommodation areas need:
 - 1. clear goals what to achieve: balance payments/ budget planning, overall managing of conflict, conservation purpose, how many geese should be accommodated (model approach)
 - 2. clear difference in "safety perception" between accommodation areas and regular farmland with scaring, from a goose perspective
 - 3. clear incentives and coordination of scaring
- Further considerations:
 - 1. set up facilitating certain species may confound use by other species (e.g. heavily grazed areas by Barnacle Goose may not beneficial to others)
 - 2. Estimation of damage should follow similar routines

