

Core areas for meadow birds require clear choices

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Agri-environment schemes in The Netherlands

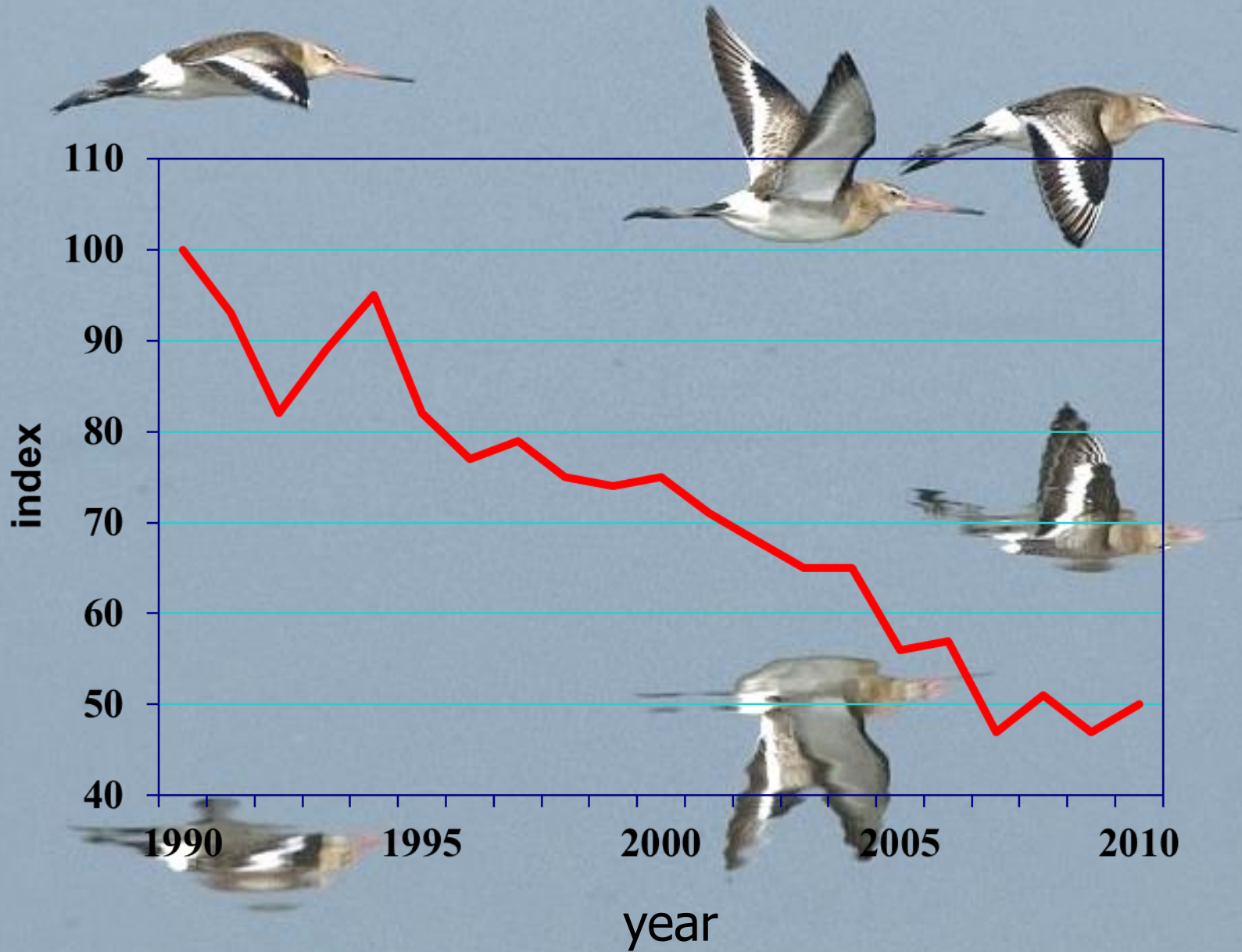
- > 45.000 hectares with agri-environment schemes (400.000 ha cared for by volunteers)
- > 25 Million euro's per year
- Limited effect (continuous decline)

A Black-tailed Godwit standing on a rock. The bird has a long, straight, orange-brown bill, a reddish-brown head and neck, and mottled brown and white plumage on its body. It is standing on a mossy rock against a solid green background.

Flagship species: Black-tailed Godwit

- > 30% of European population in NL
- long term decline

Trend NL 1990-2010



How can we halt the decline ?

Spatial focus:
core areas
for conservation?

How to identificate?

- Important population present
- Possibilities for proper habitat and landscape management
- Support (local) government and farmers

Where are the birds?

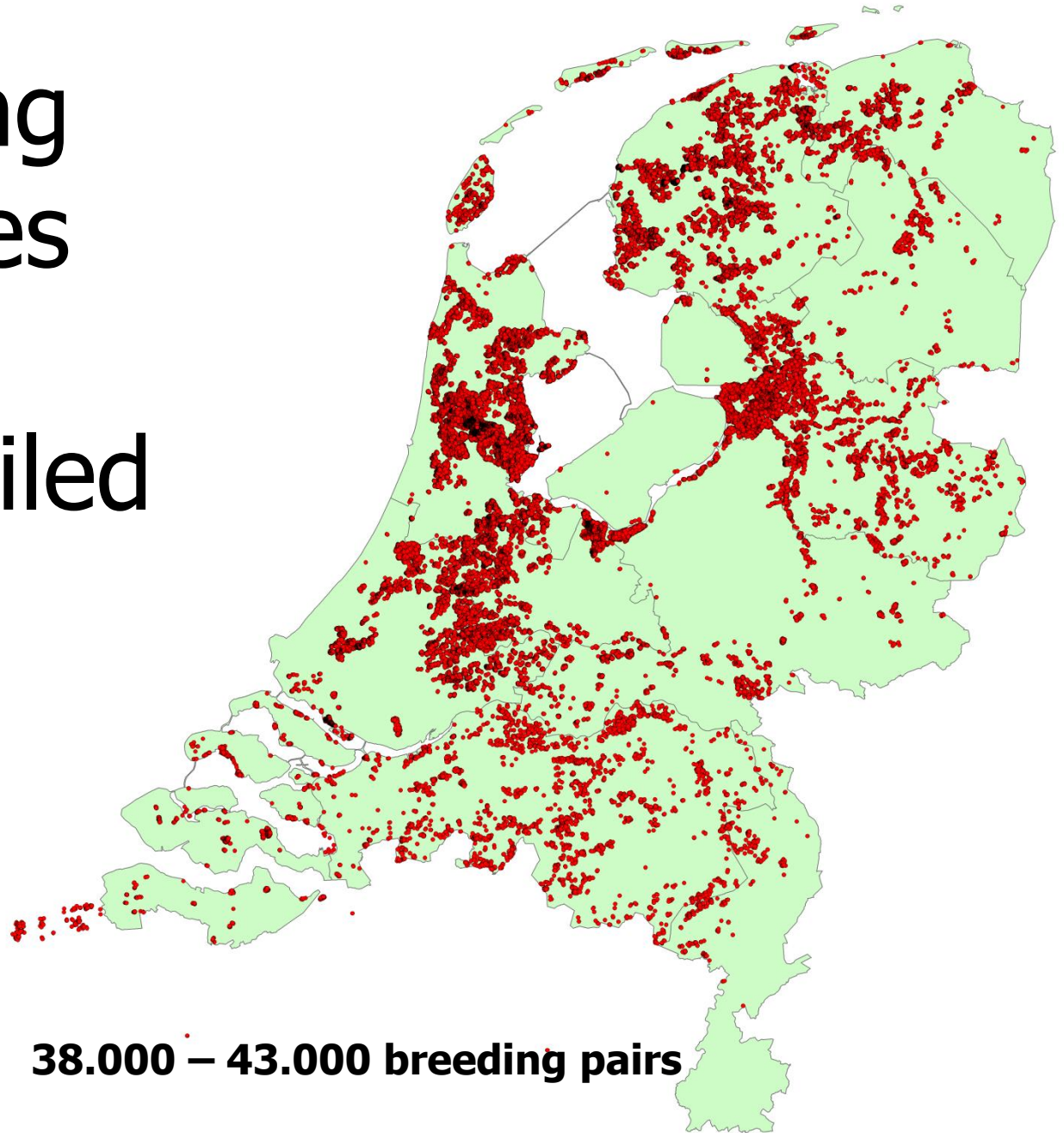
detailed abundance map

Occurring territories

(centroids)

Black-tailed Godwit

(1984-2011)

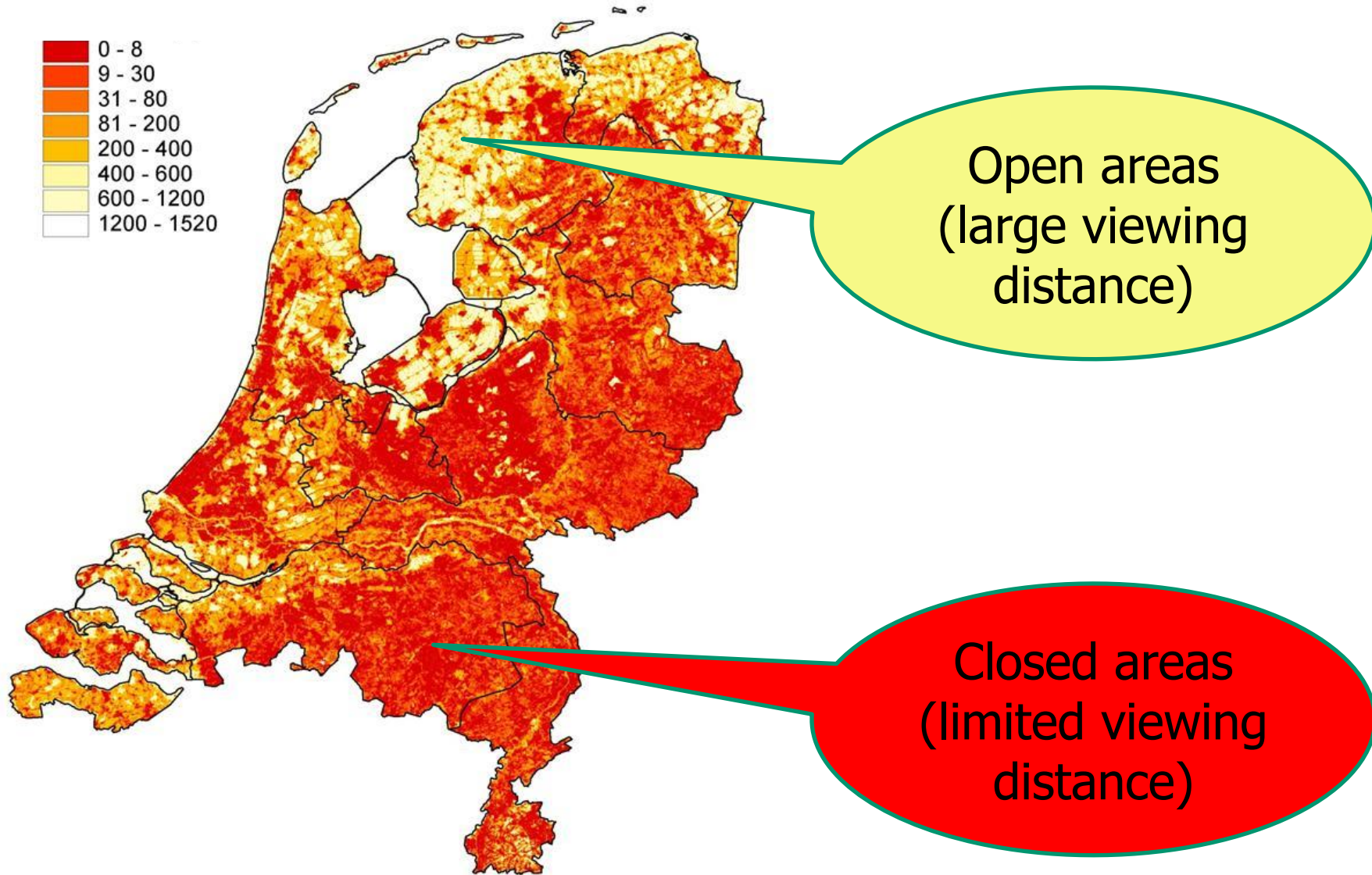


38.000 – 43.000 breeding pairs

Ecological requirements

What are the characteristics of Black-tailed Godwit areas where the population did not decline?

Openness





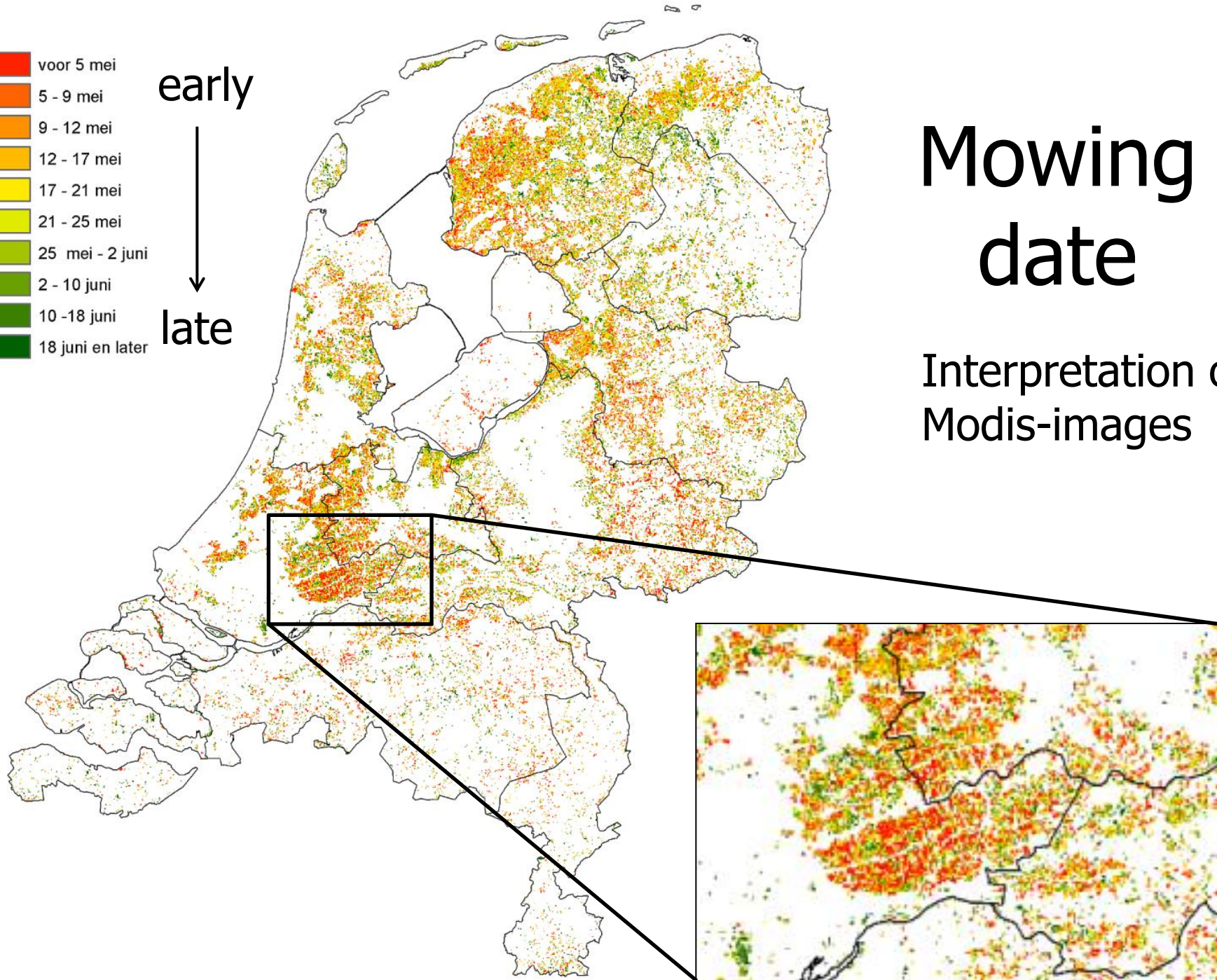
early

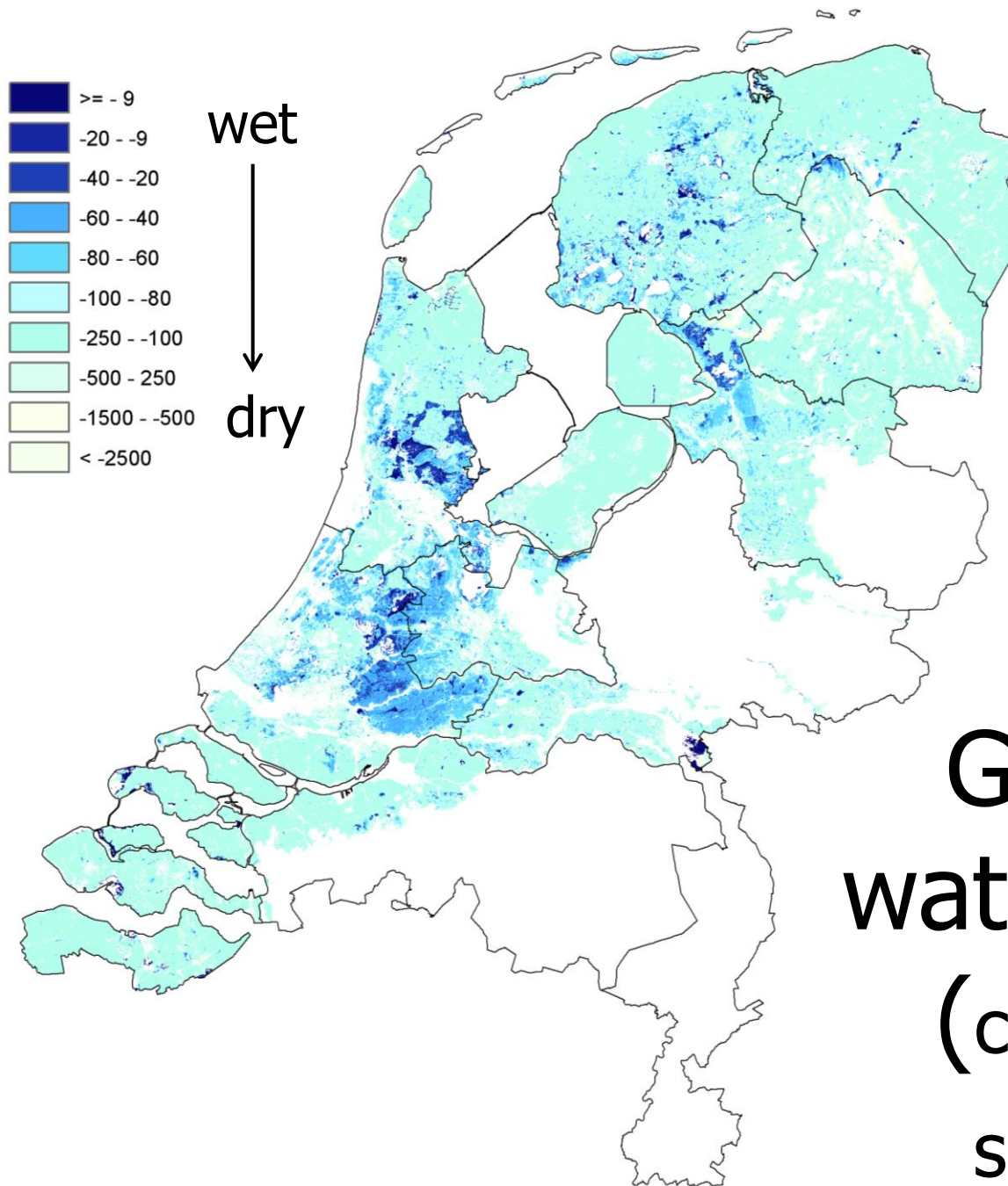


late

Mowing date

Interpretation of
Modis-images





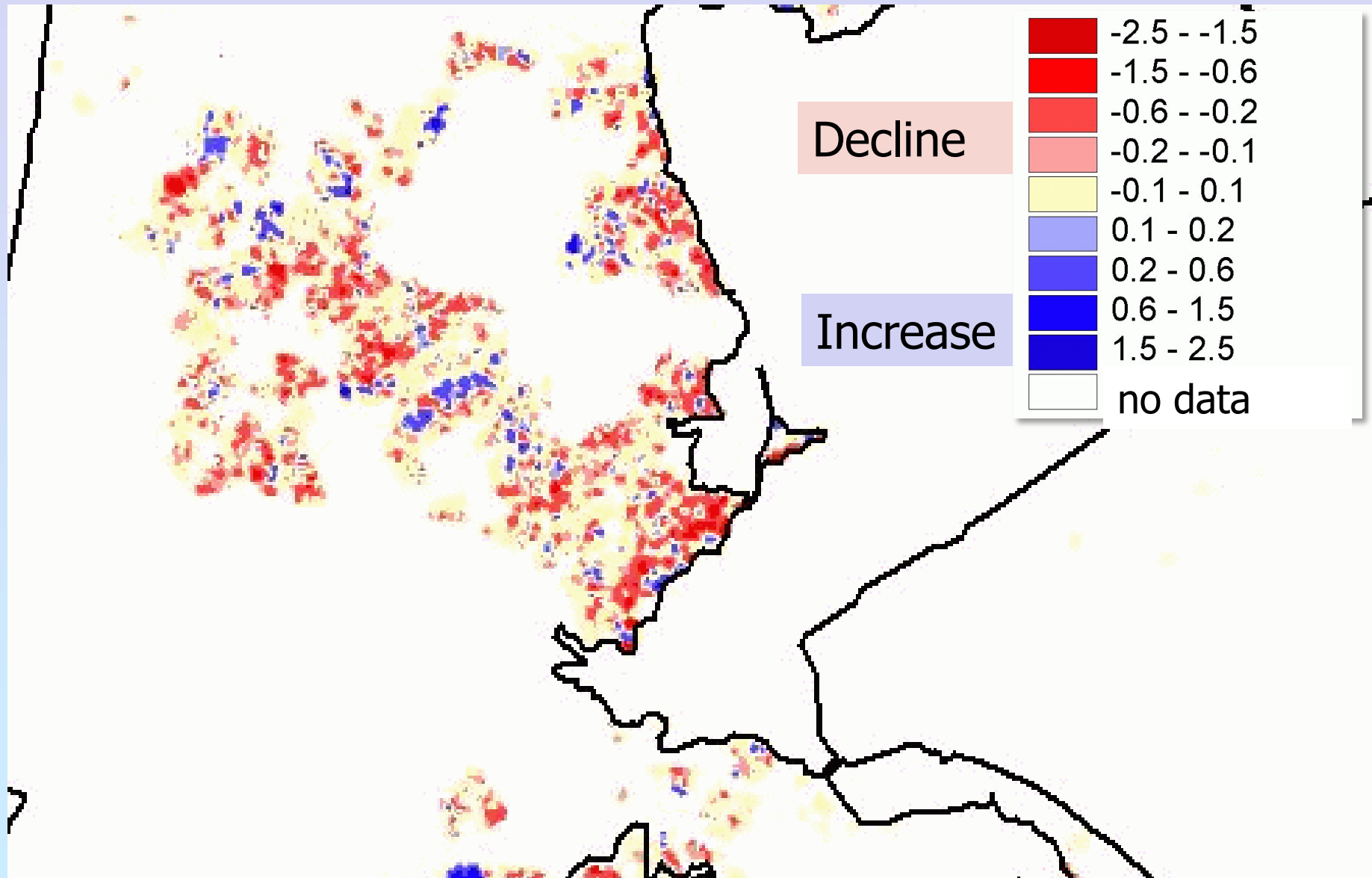
**Ground
water levels
(cm below
surface)**

The background of the slide is a photograph of a vast, flat field. The foreground and middle ground are filled with green grass interspersed with numerous small, bright yellow wildflowers. In the far distance, a line of trees is visible against a pale, overcast sky. The overall scene is a natural, rural landscape.

Spatial trend

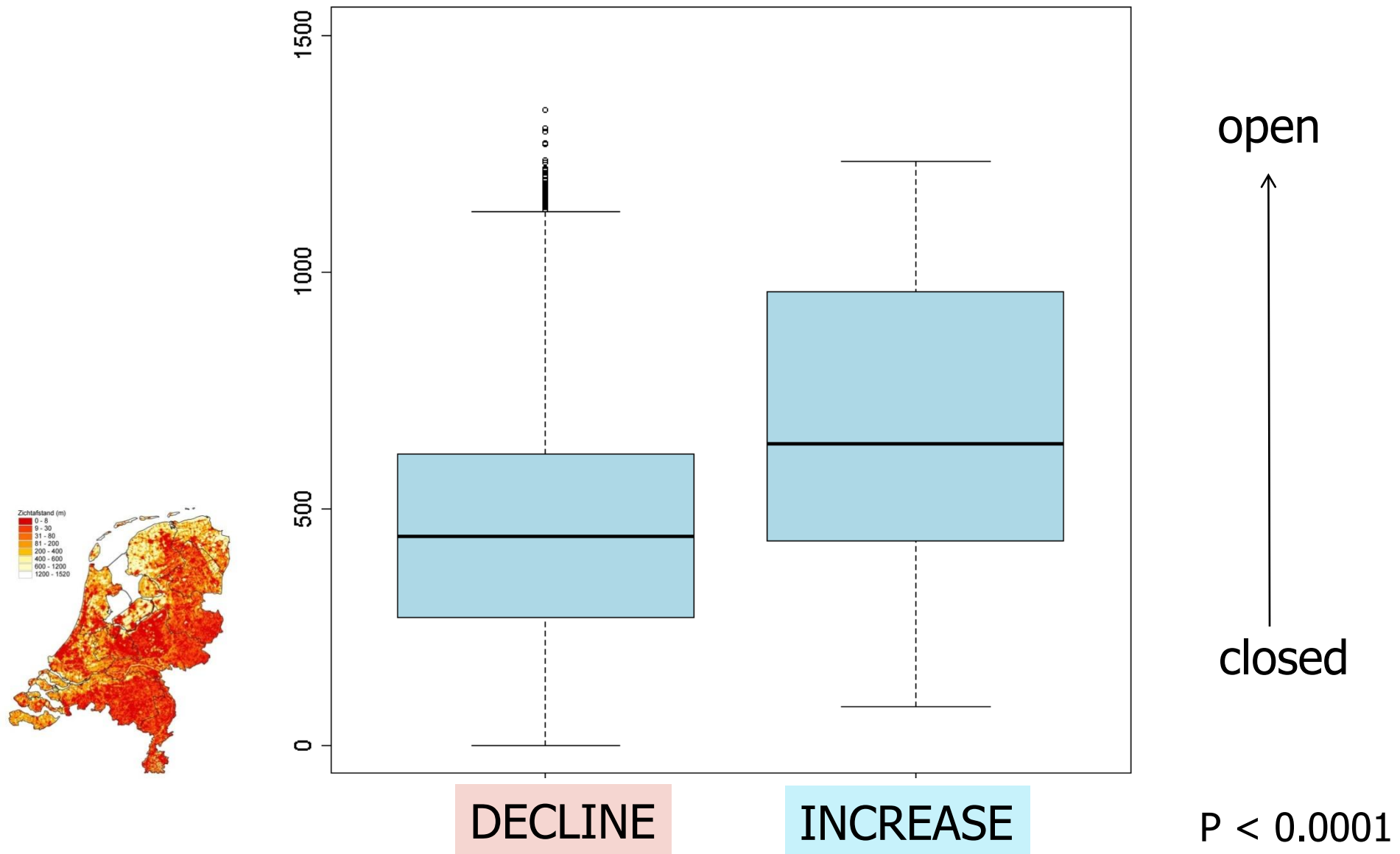
Difference in local density per
hectare-cel between 2004 and
2011

Spatial trend 2004 -2011



Relationship trends and environmental variables

Openness and Godwit-trend



Relative importance variables

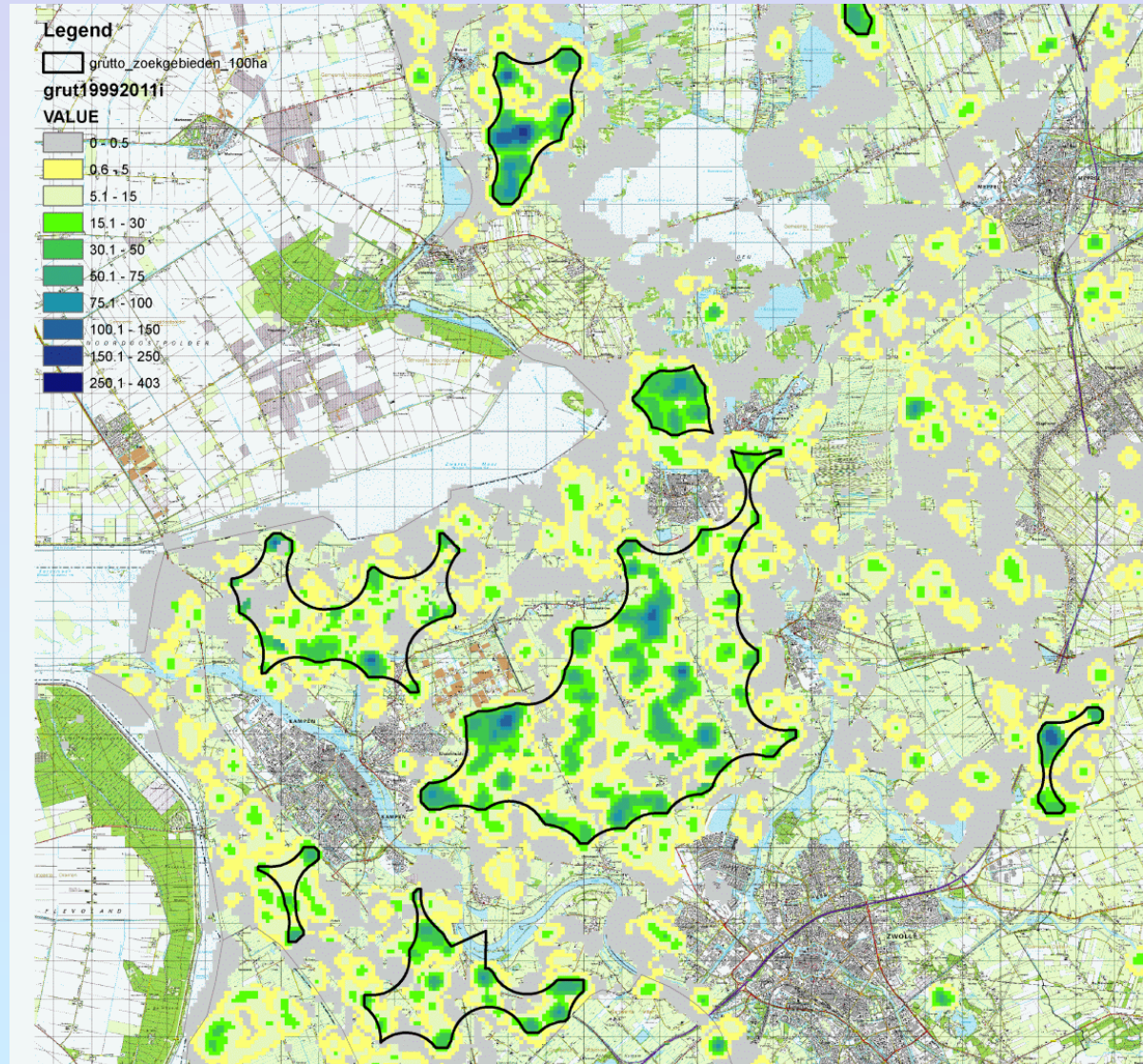
(ordered from most to less important; GLM-models)

Variable	Required
Openness	> 600 meter viewing distance
Mowing date	> May 22nd
Ground water levels	> -50 cm
Presence of herbs	
Management status (reserve, private, etc)	
Disturbance by traffic	>200 m from main roads

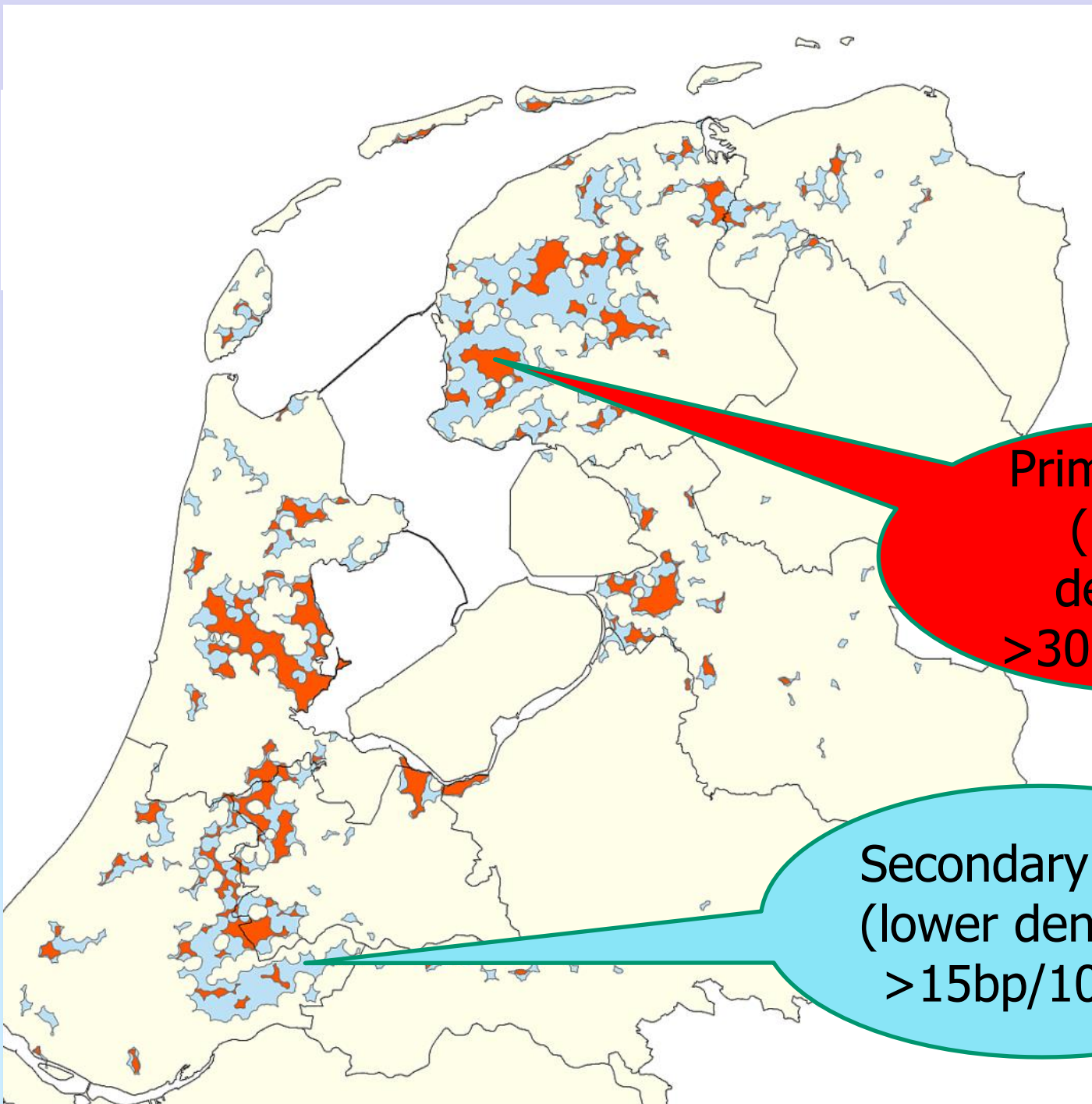
Search areas for core areas

Combine local sites with high densities
Maximum distance between local sites
2km (based on the local movements of
families)

Local density and search areas



Search areas



Primary areas
(highest
densities;
>30bp/100ha)

Secondary areas
(lower densities;
>15bp/100ha)

Now we know:

- Where the birds are
- What they need
- What next?

Realisation of core areas

- Confront local situation with ecological demands: what has to be improved, what are the possibilities?
- Are there future threats?
- Who are the local actors? Will there be enough local support?
- Define legal (planological) status

Confrontation within search areas

Variable	Required	Area1	Area2	Actions
Openness	> 600 m	550 m	500 m	Cut trees
Ground water level	> -50 cm	-90 cm	-60 cm	Increase water table
Mowing dates	> May 22	May 5	May 20	Postpone mowing

Next: is there enough local support in Areas ?



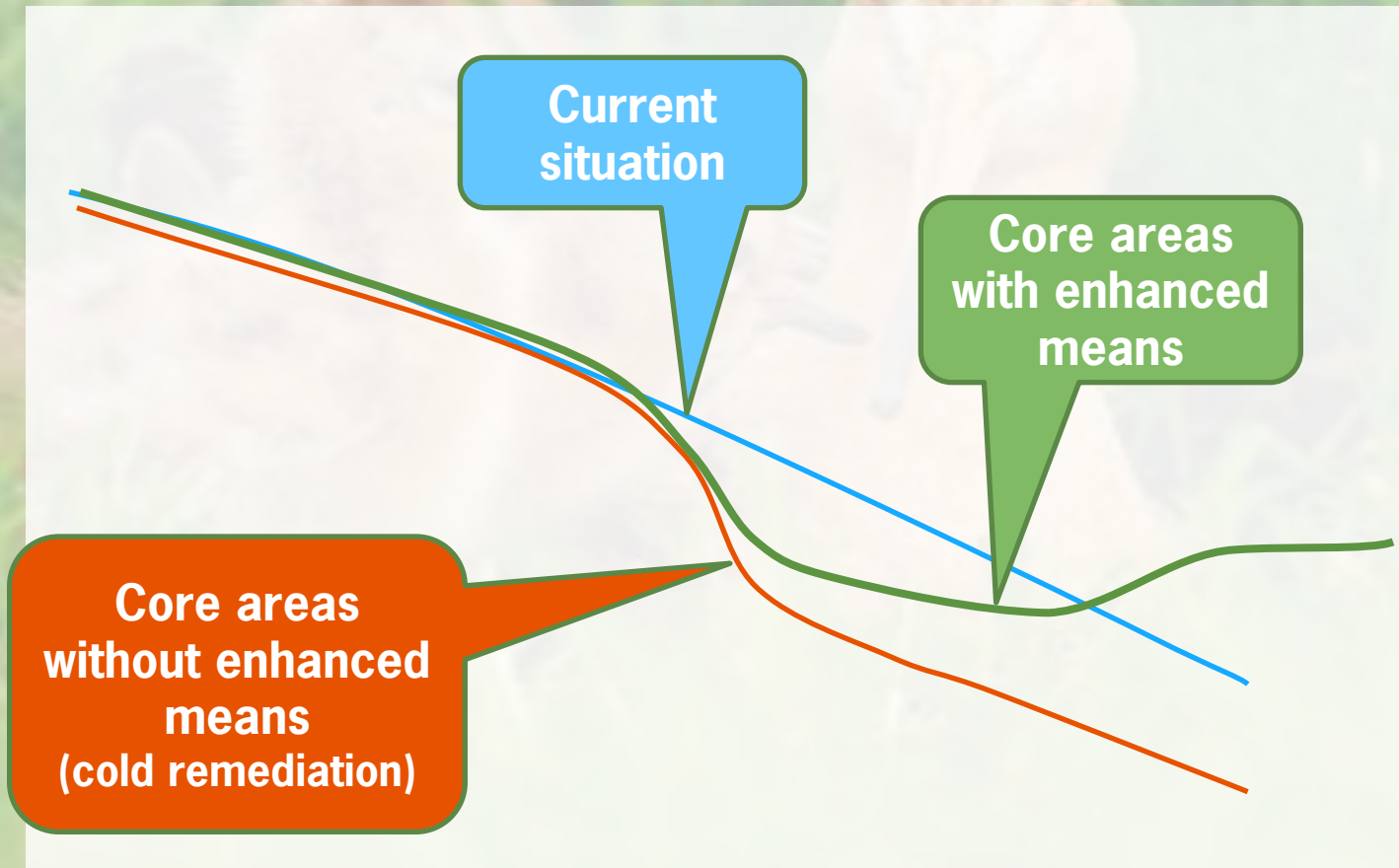
or



?

Province
Waterboard
Municipalities
Farmers, cooperatives
Nature conservation
organisations
Citizens
Current policy, schemes

Possible developments



Search areas and % national populations

Species	Primary areas	Primary + secondary areas
Black-tailed Godwit	30 %	57 %
Shoveler	16	40
Redshank	14	34
Oystercatcher	9	26
Lapwing	8	20
Skylark	5	13
Tufted Duck	5	15
Meadow Pipit	4	13
Yellow Wagtail	1	3

Large differences between provinces

Other species

- Current selection based on Black-tailed Godwit
- Additional sites necessary for other meadow bird species





Thank you for your attention