

Tagfaltermonitoring in den Nederlanden



Chris van Swaay

De Vlinderstichting – Dutch Butterfly Conservation

Butterfly Conservation Europe



Tagfaltermonitoring



- Why you should monitor
- Why you should do 15min counts
- Rare species matter
- Use of monitoring data for conservation of butterflies
- Why your government needs monitoring results

Why you should monitor



1. It's fun (I am an addict)
2. Only way to show what is going on
3. Important on all levels: local – regional – state – country - EU

It's fun: Ernie Pollard



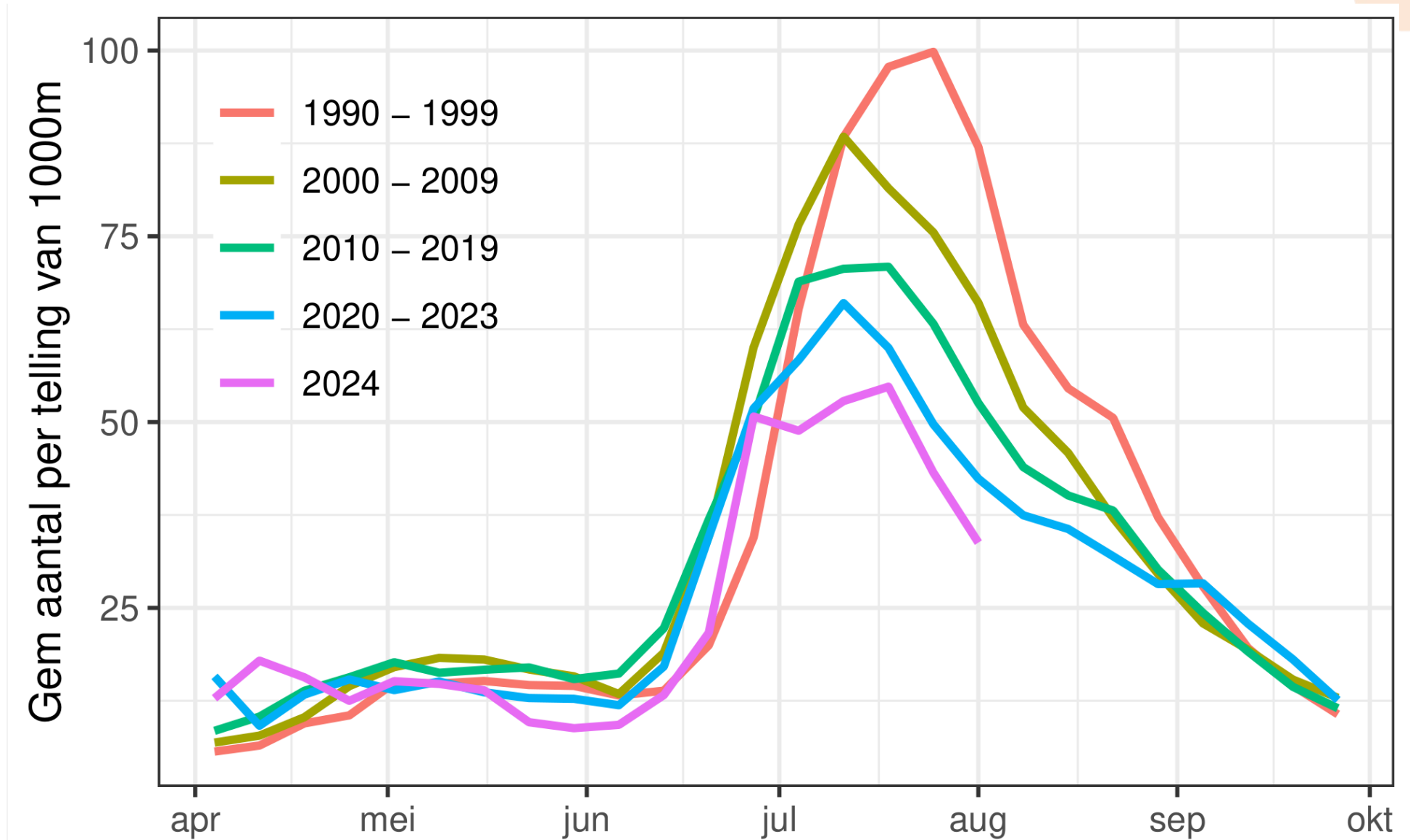
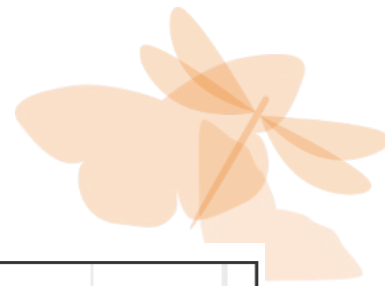
A wide-angle photograph of a large audience seated in a theater. The audience is diverse in age and is seated in rows of red chairs. The theater has a dark interior with some stage lights visible. The text "It's fun: Dutch Butterfly Day: 650 visitors" is overlaid on the top right of the image.

It's fun: Dutch Butterfly Day: 650 visitors

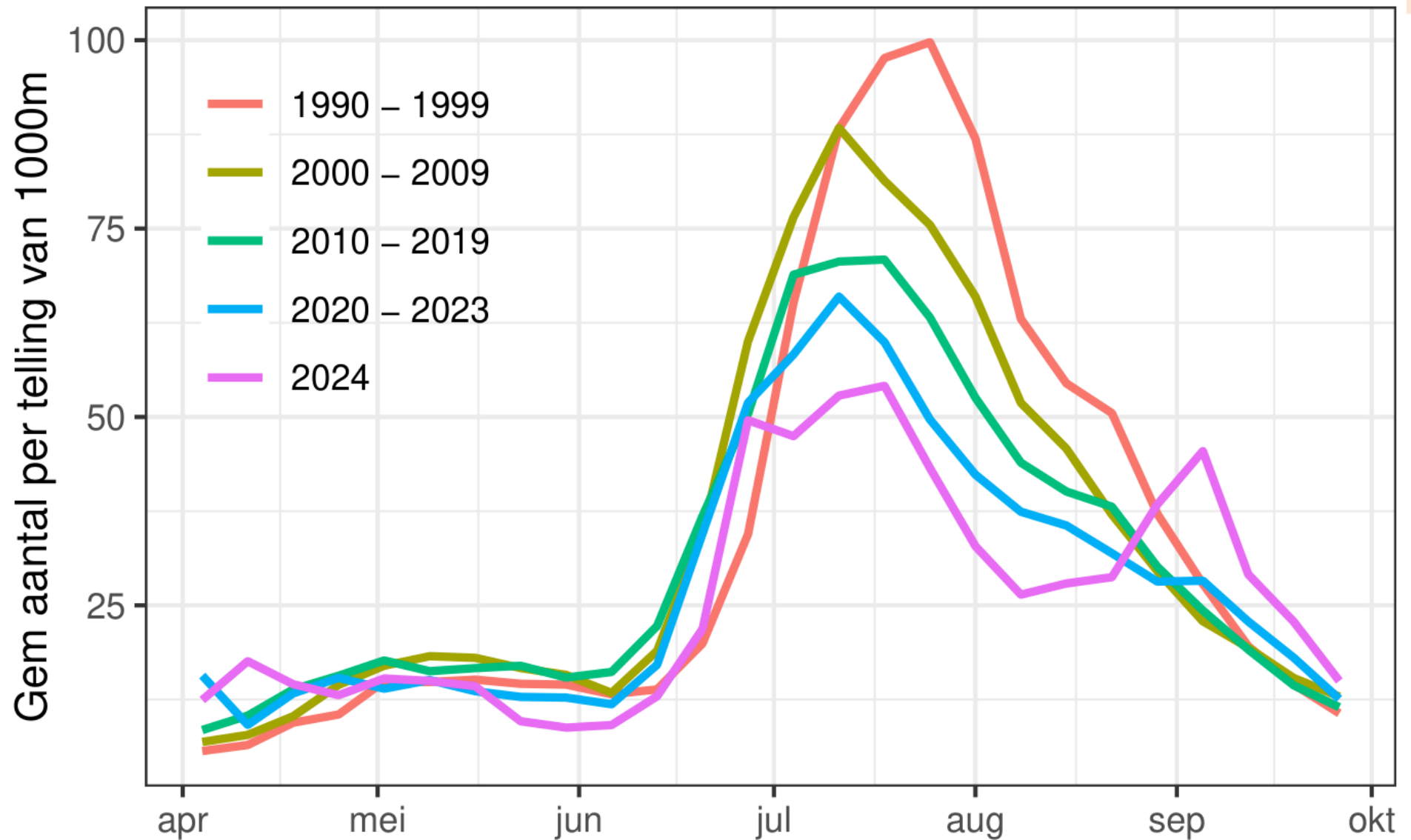




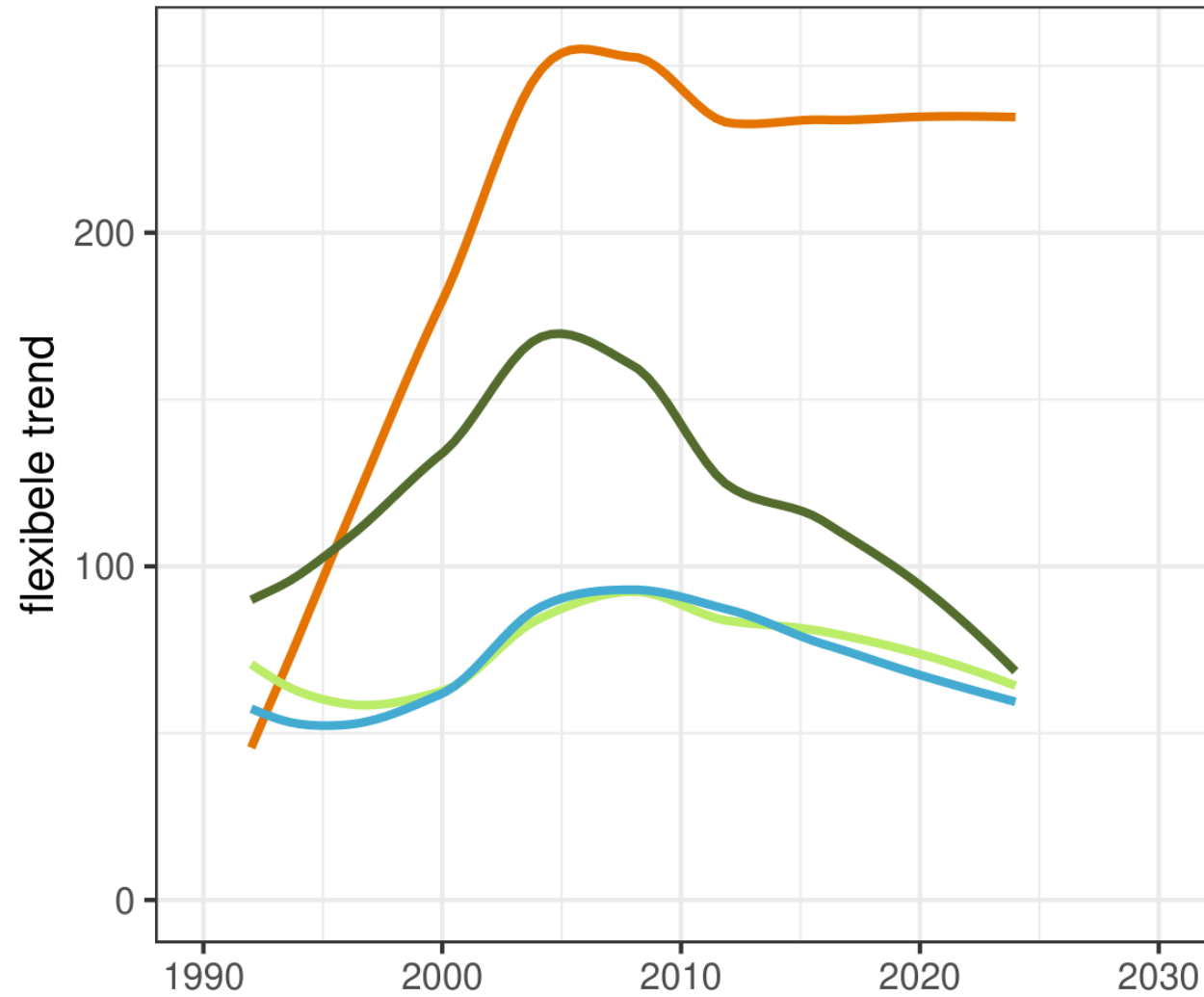
What is going on?



What is going on?



Trend per stratum



- Urban
- Semi-natural grass
- Agriculture
- Woodland

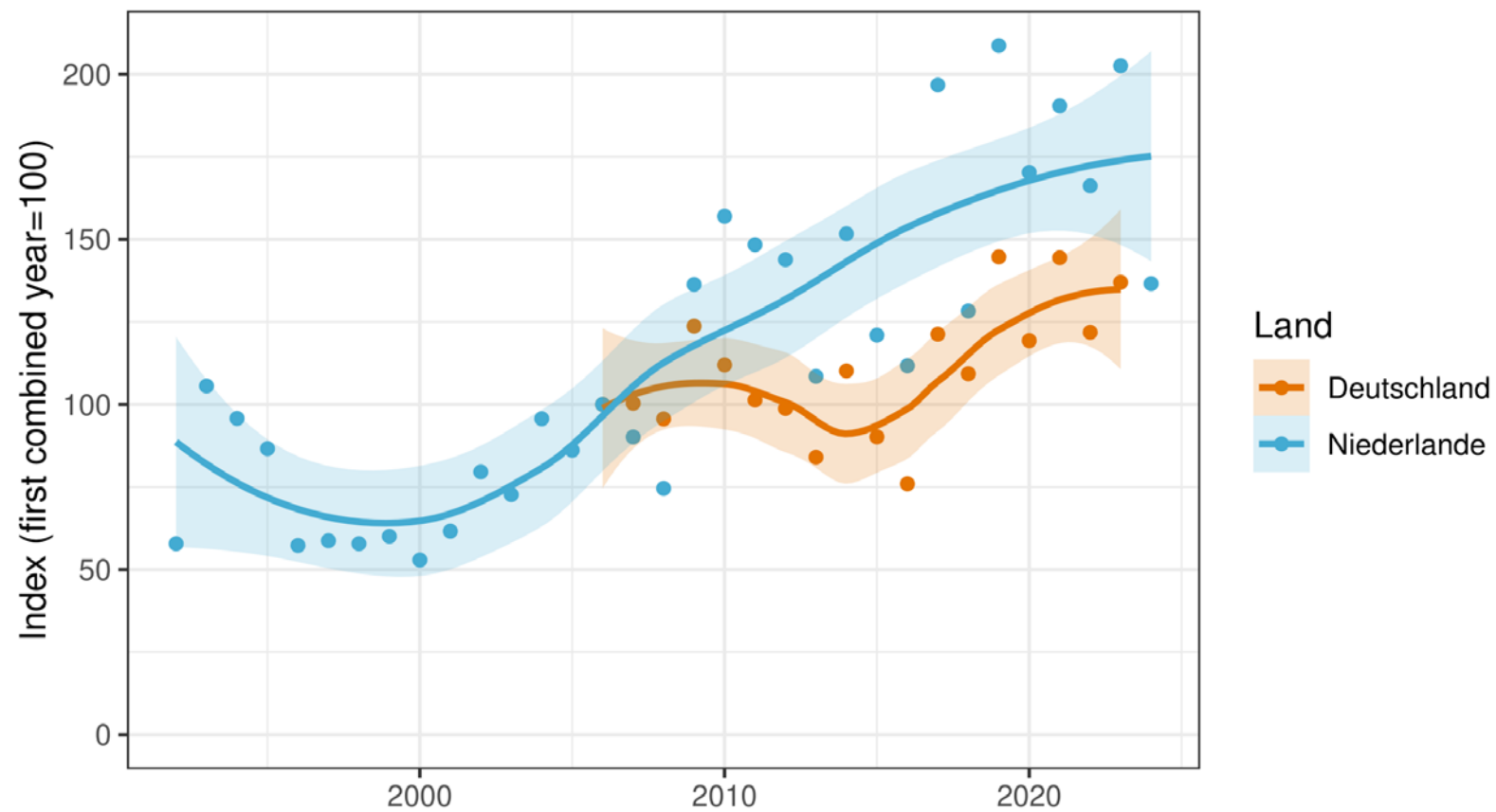
Get best trends by weighting

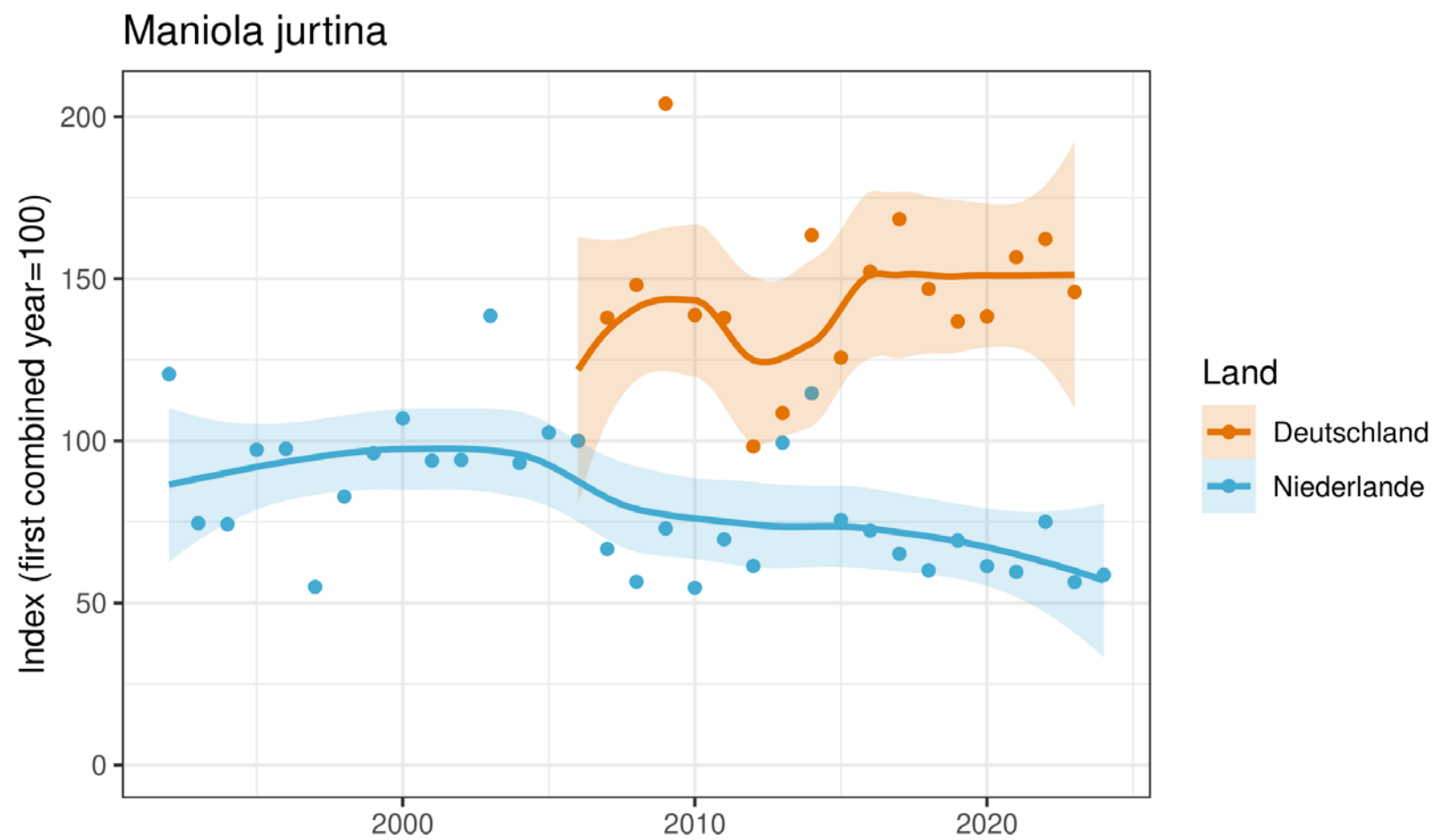


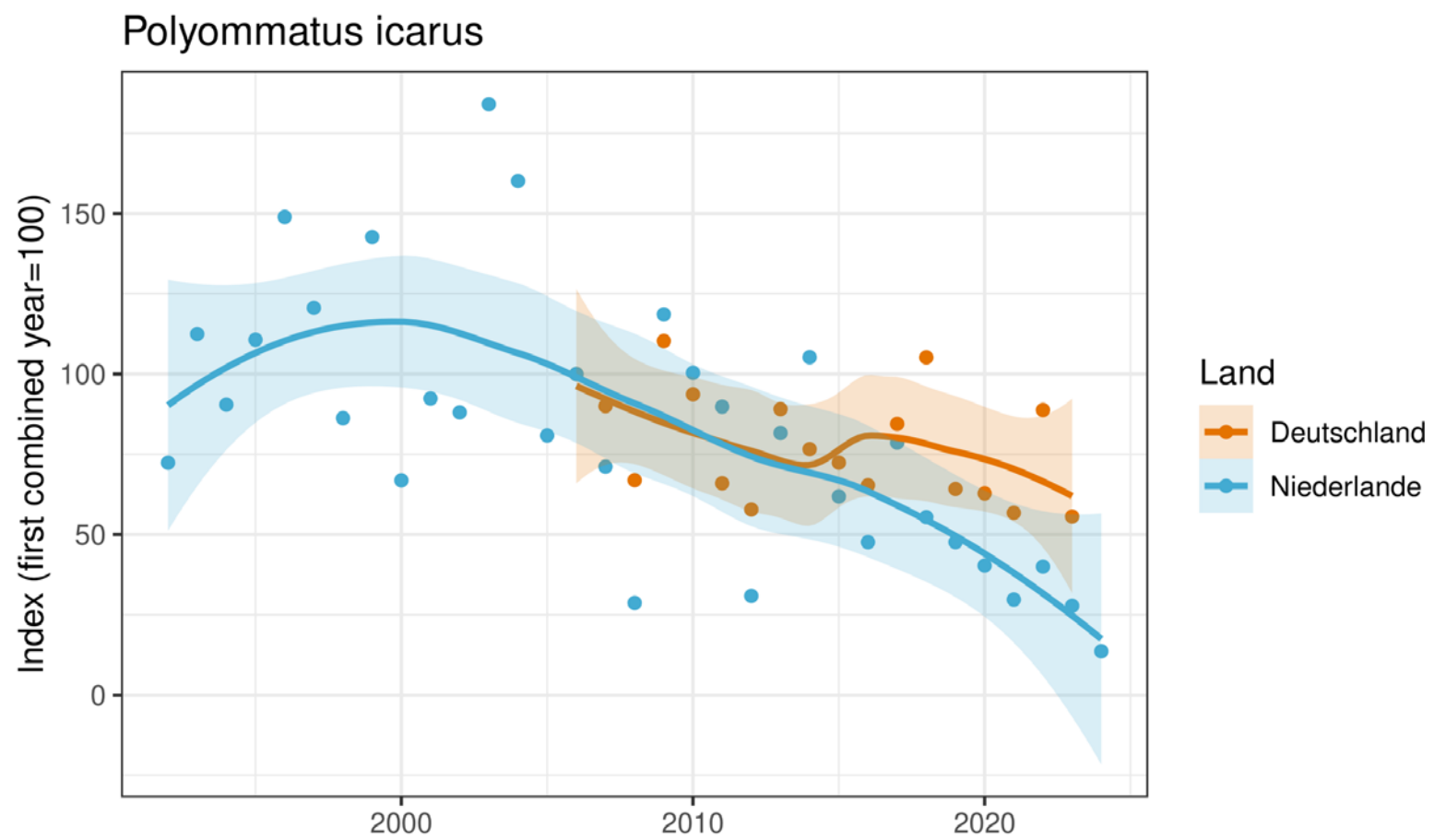
- Transects are not randomly distributed (e.g. recorders have a preference for nature!)
- Trends can be different per stratum
- Solution: weighting
- If possible we calculate the trend per combination of habitat (e.g. woodland) and soil/region (e.g. Sandy soils in north)
- Weight comes from occupancy (=distribution) in that stratum



Anthocharis cardamines

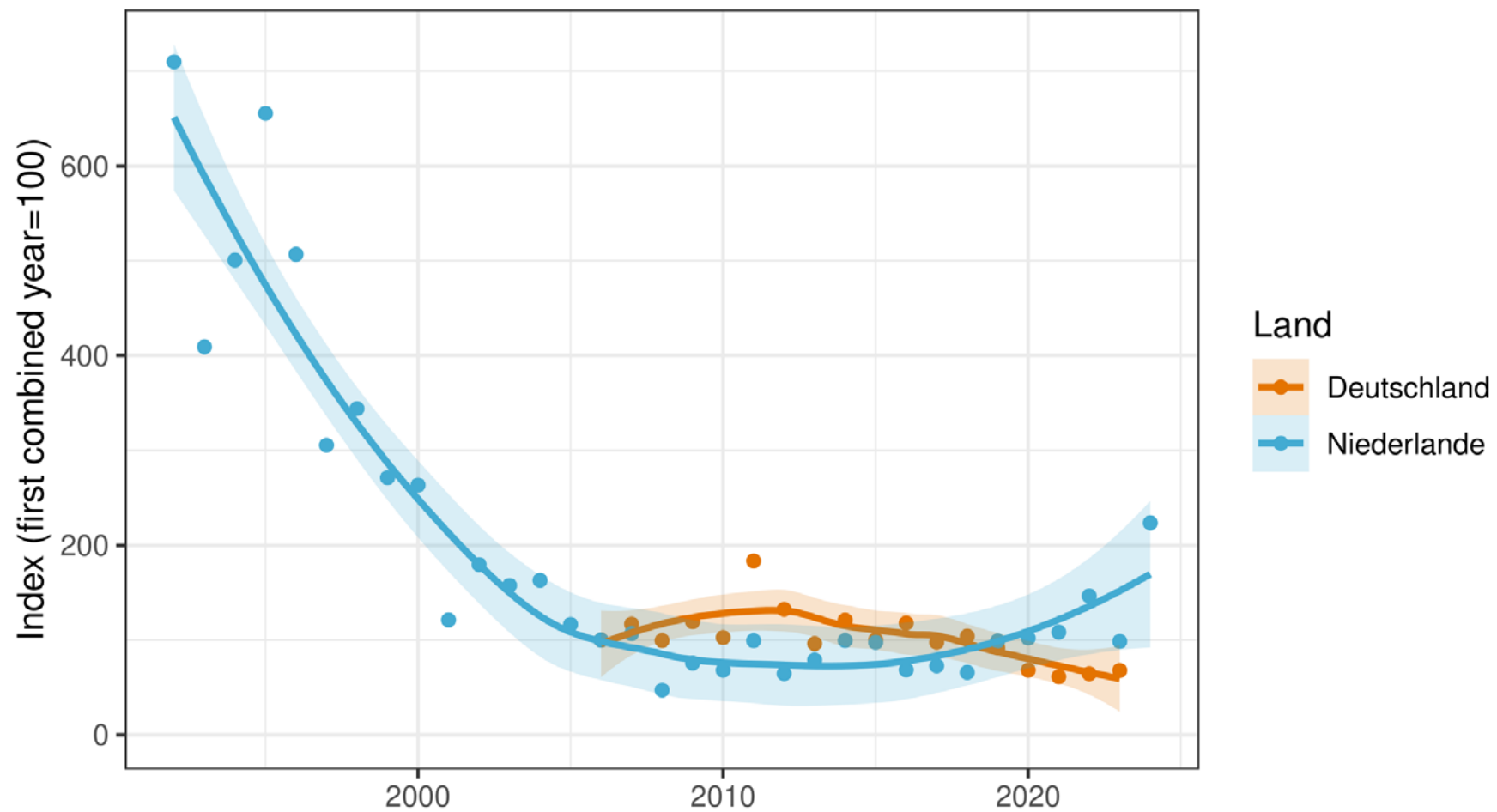




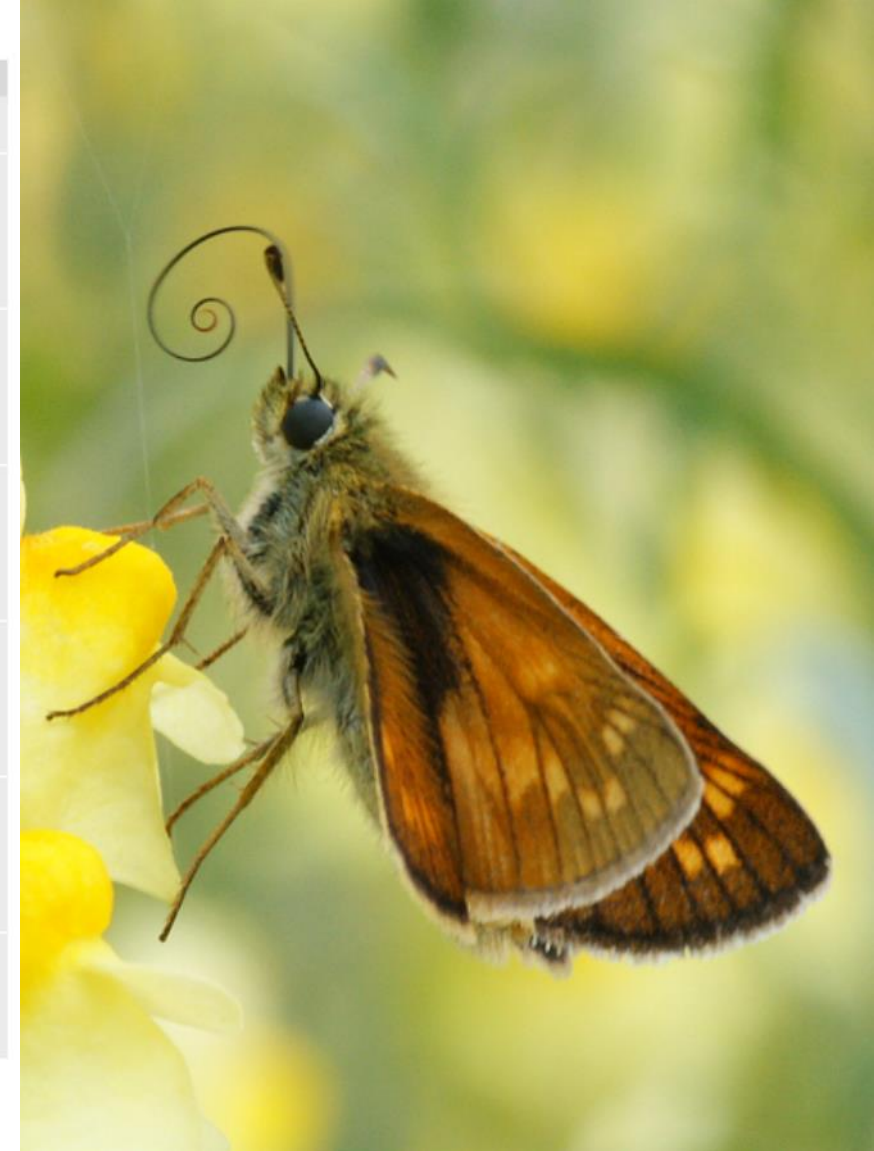
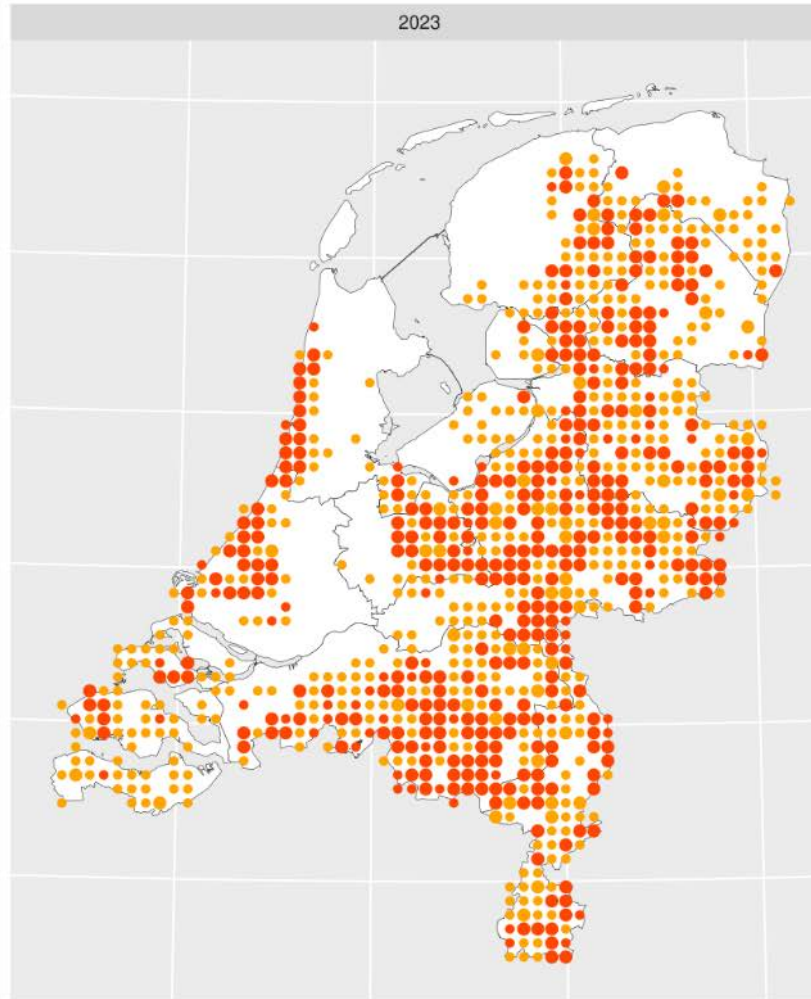
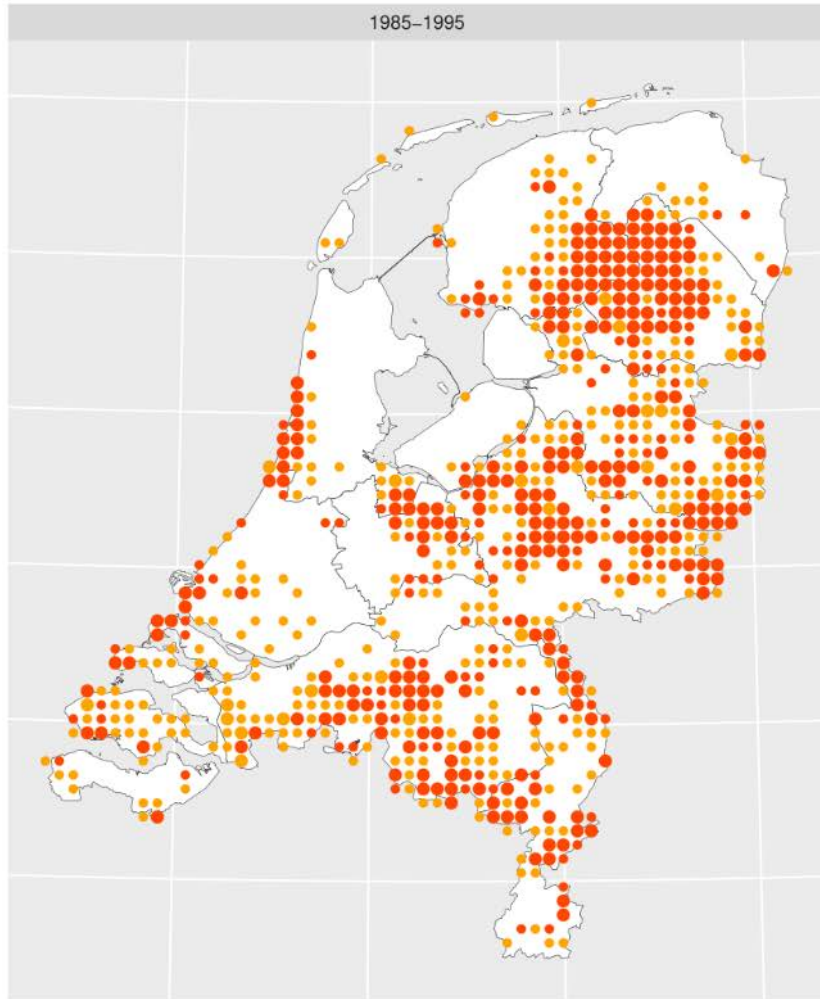




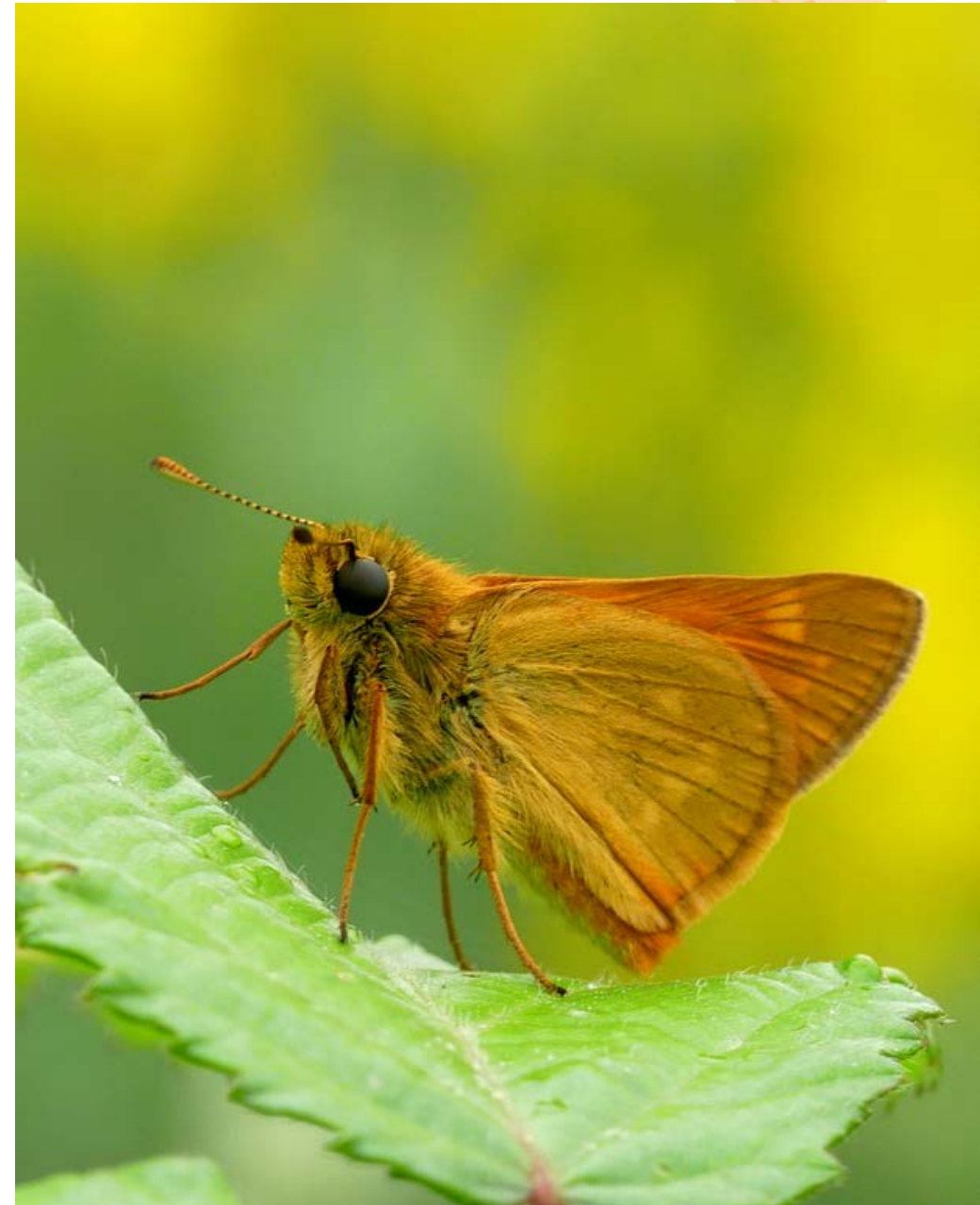
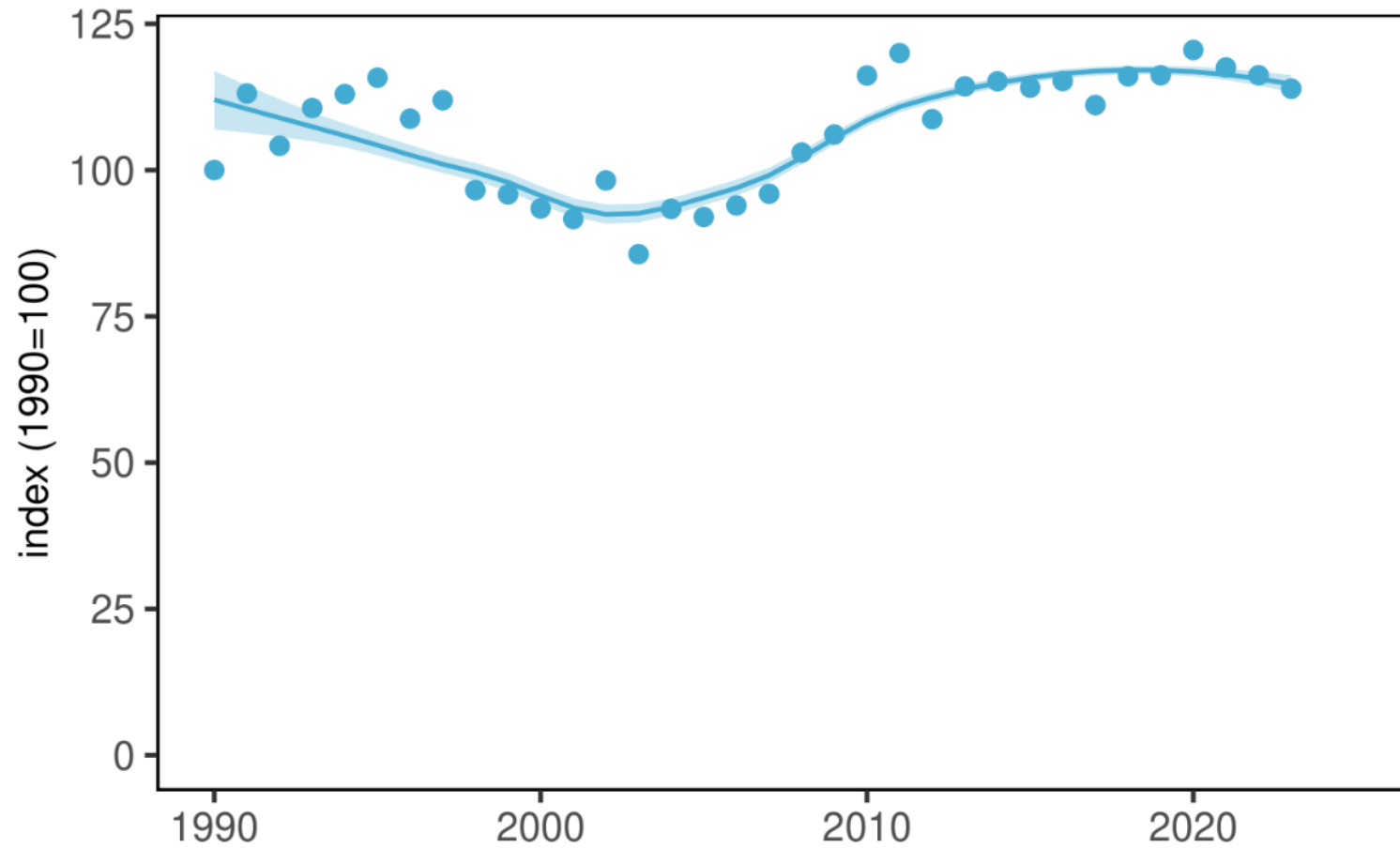
Thymelicus sylvestris



Ochlodes sylvanus

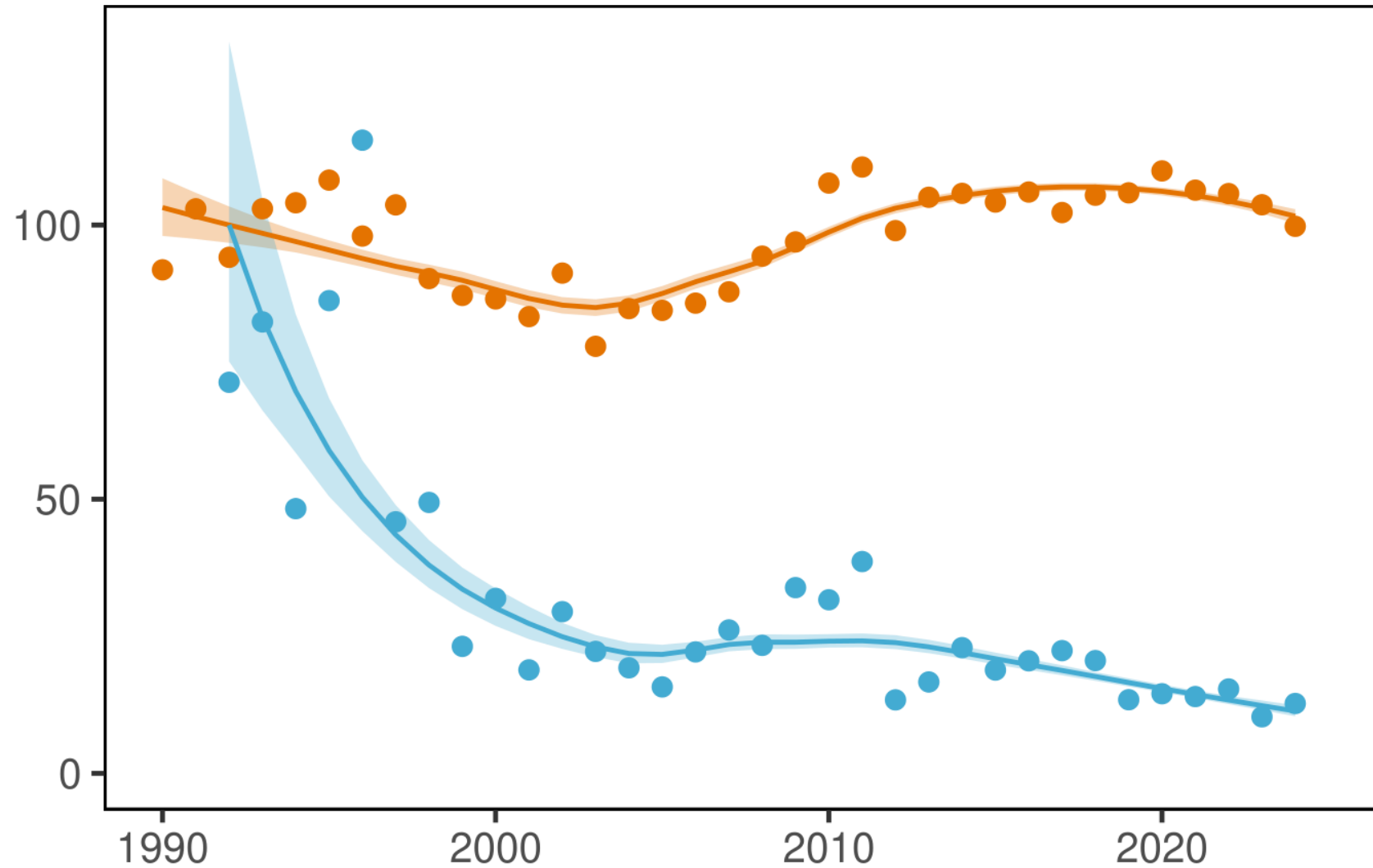


Ochlodes sylvanus



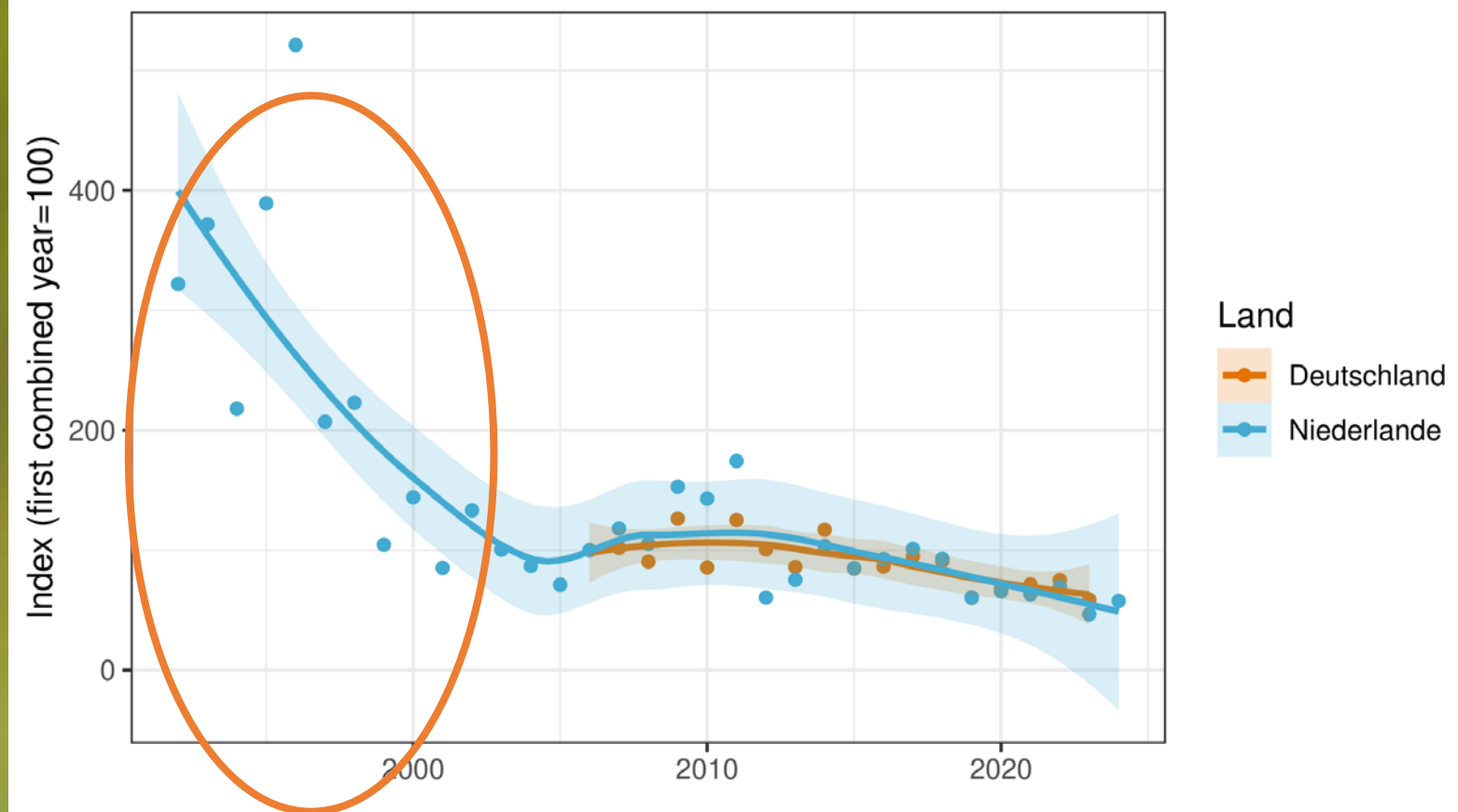
Ochlodes sylvanus

Groot dikkopje





Ochlodes sylvanus



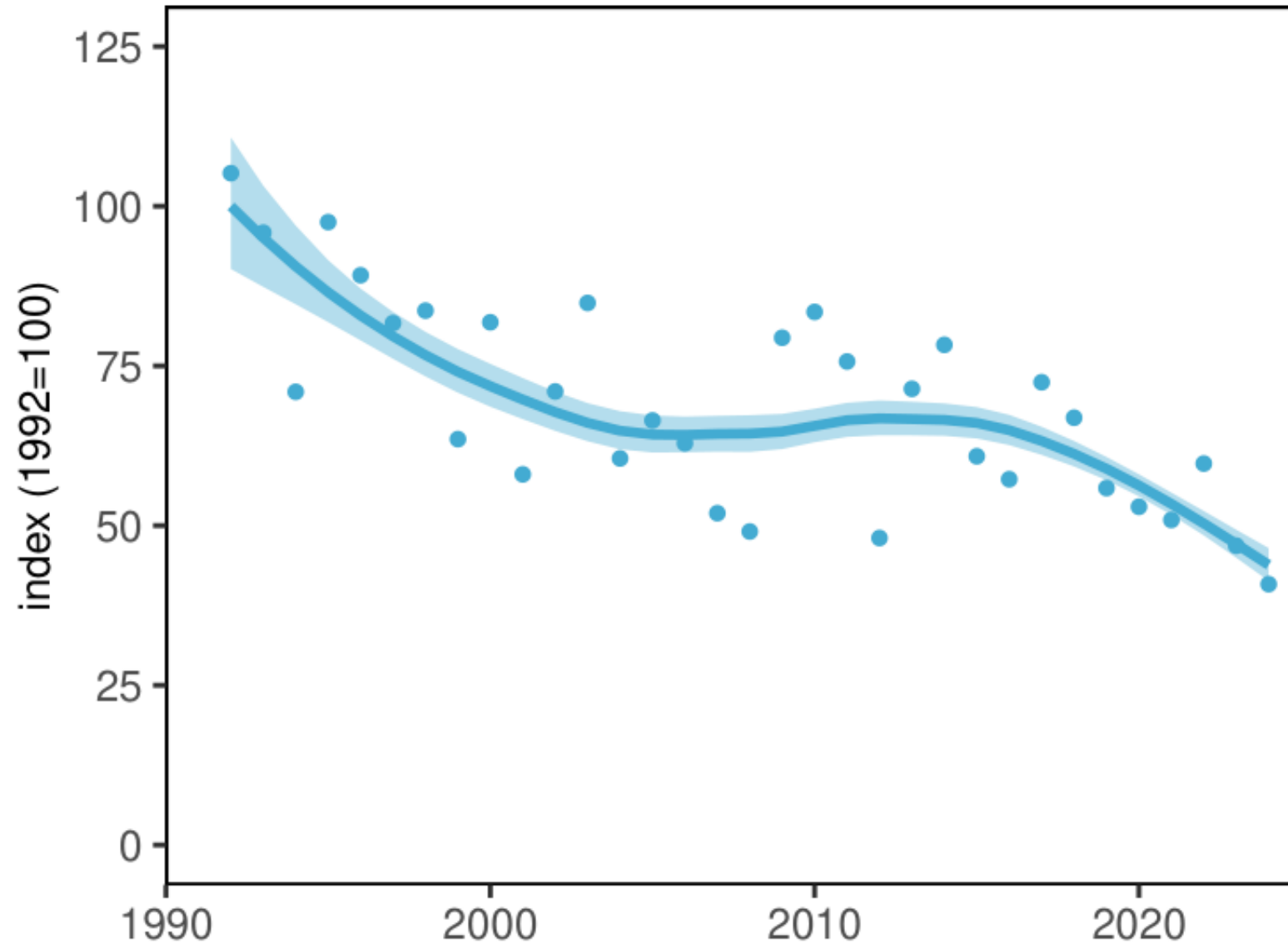
Shifting baseline?

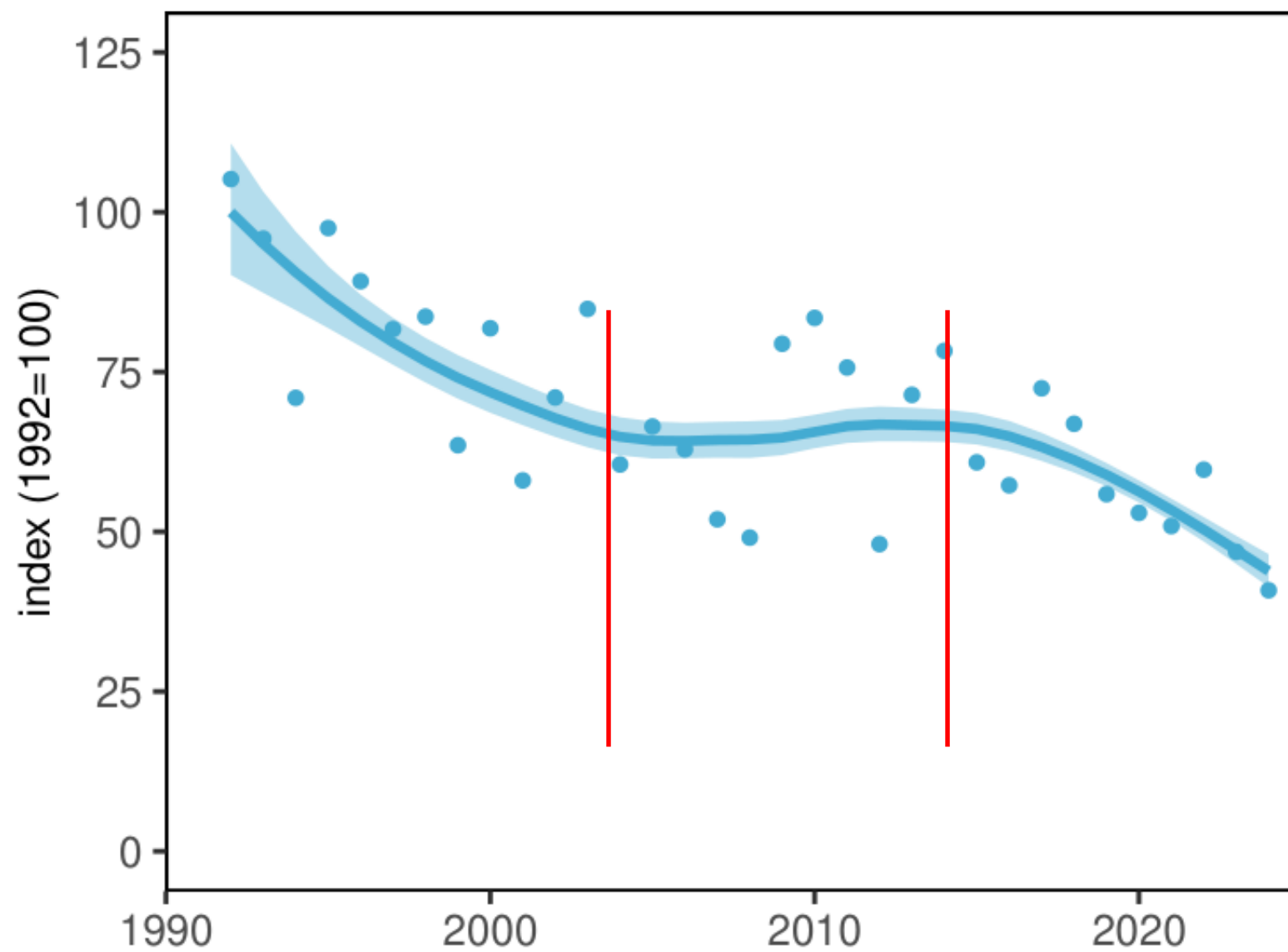
Making indicators

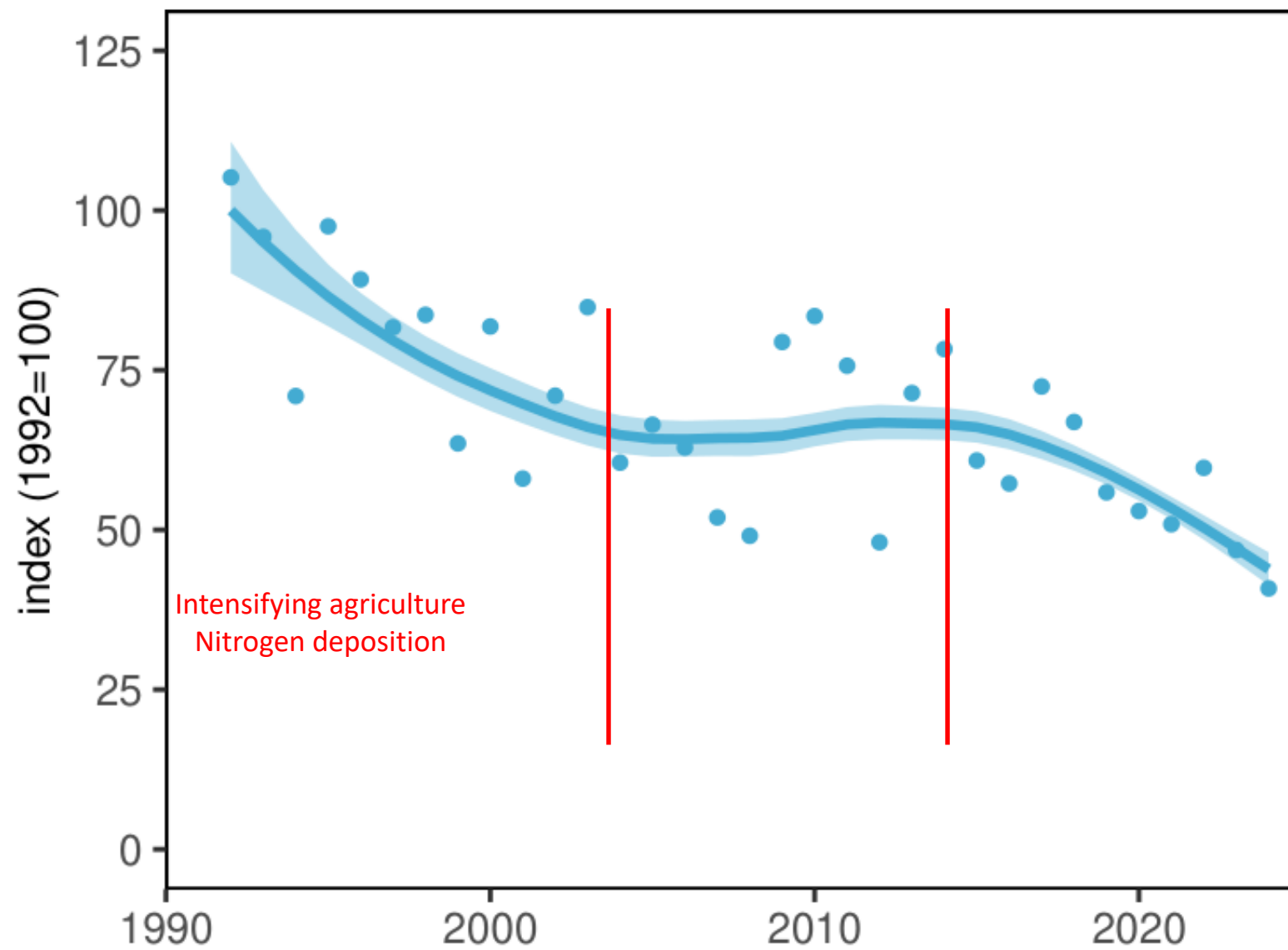


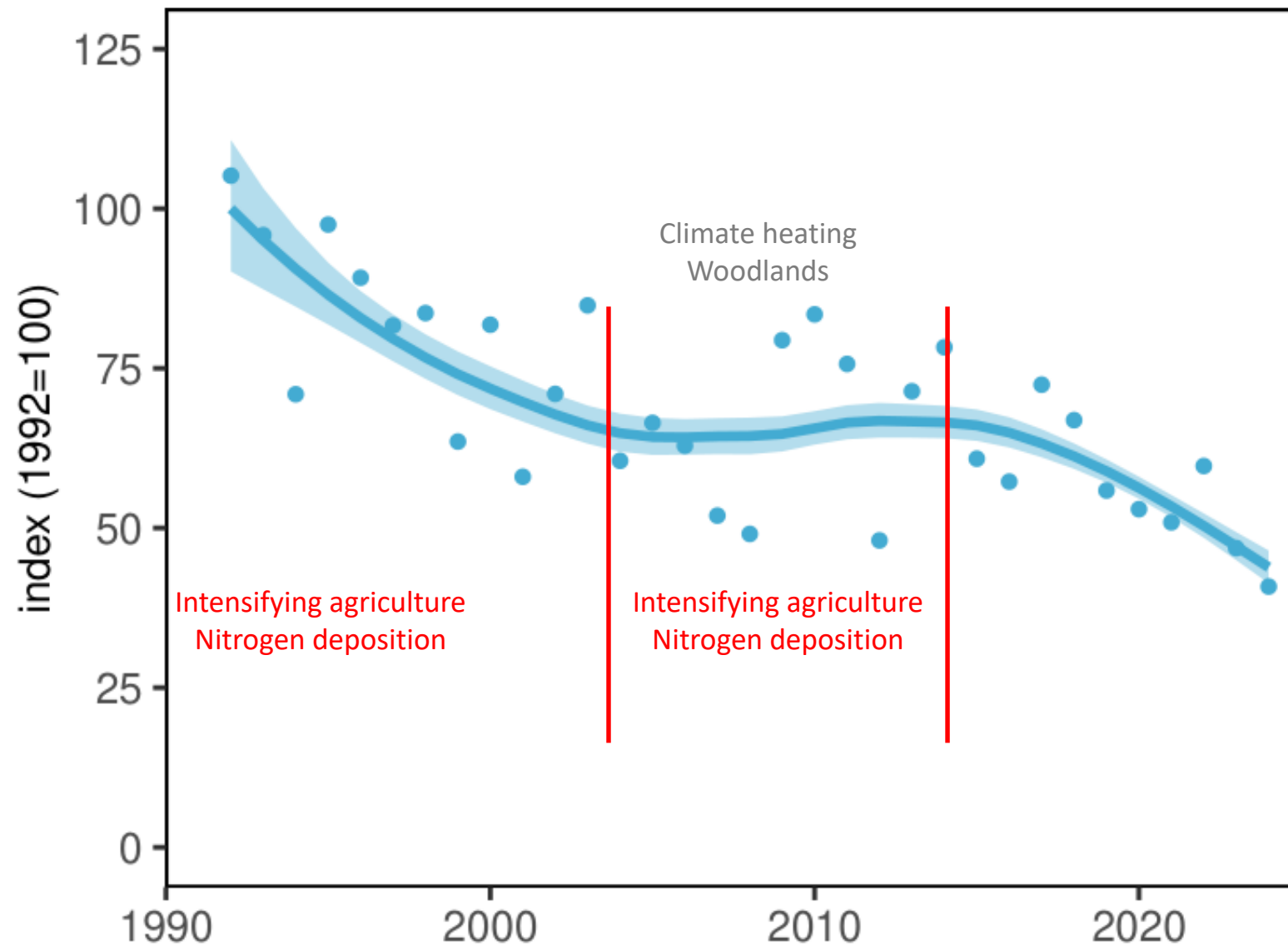
- Make one graph to combine them all
- Comparable with DAX/Dow Jones (politicians think they understand)
- Combine speciestrends to indicator

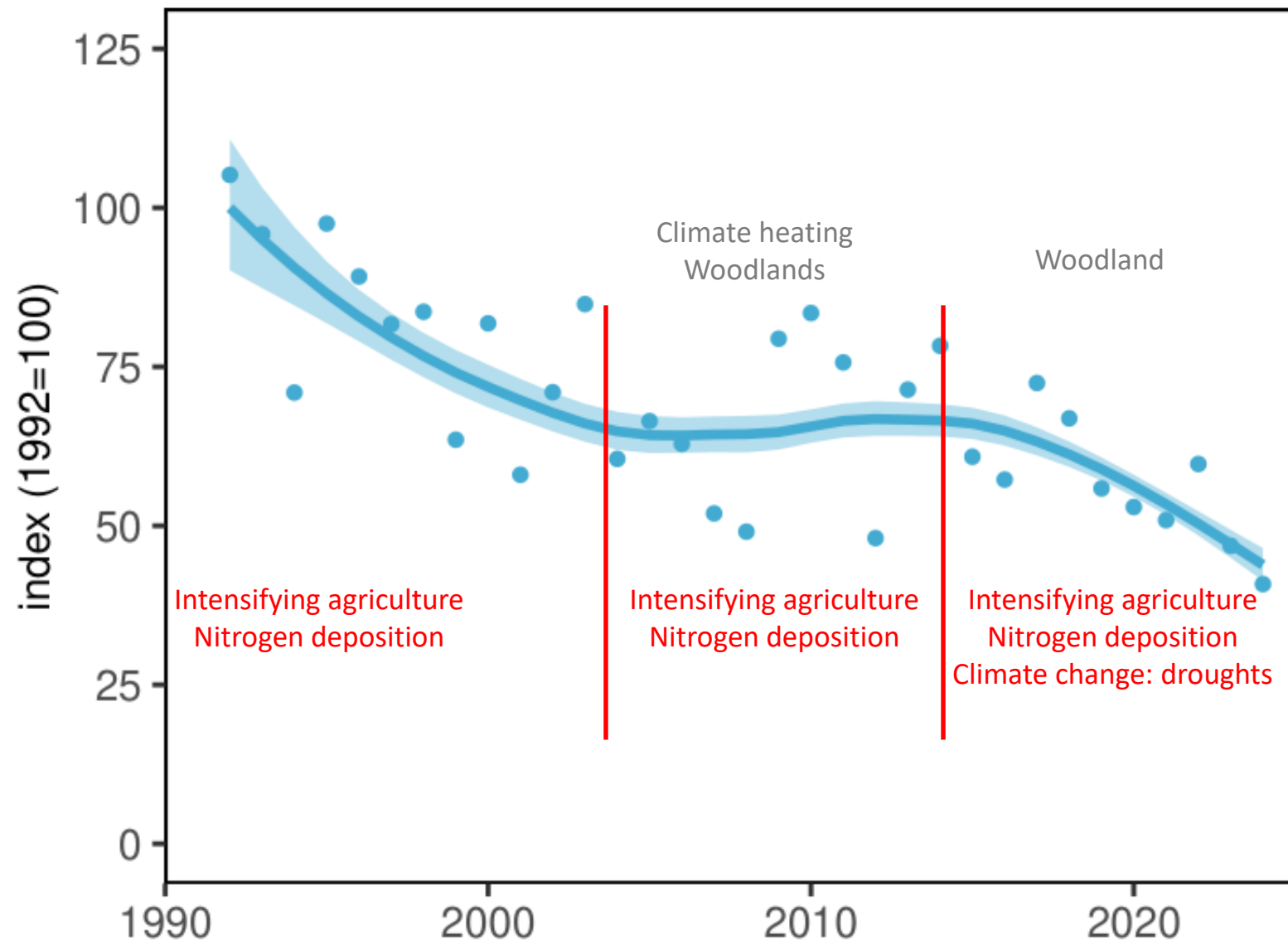
Indicator for all butterflies in Netherlands



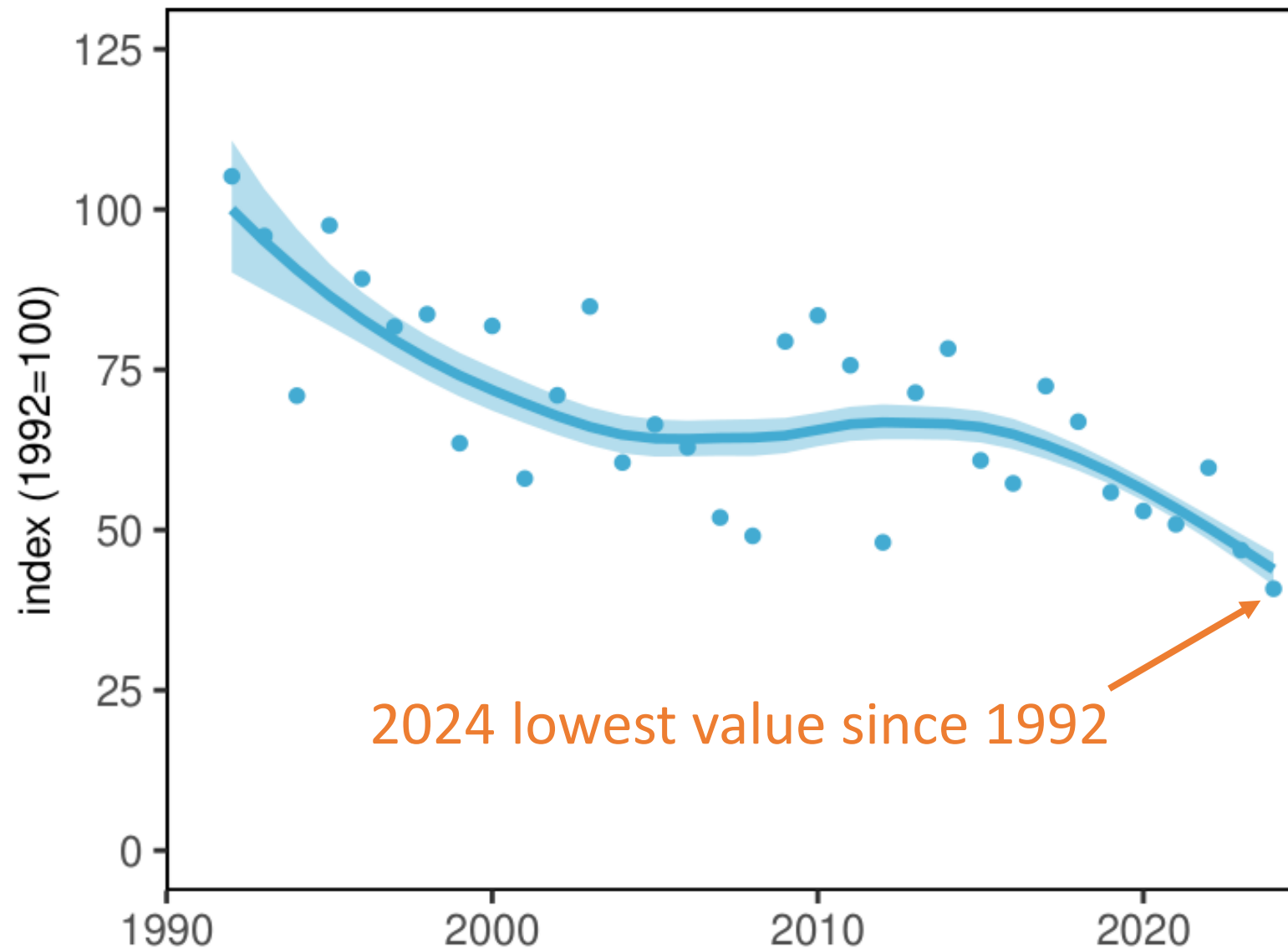








Indicator for all butterflies in Netherlands



Grassland Butterfly Index

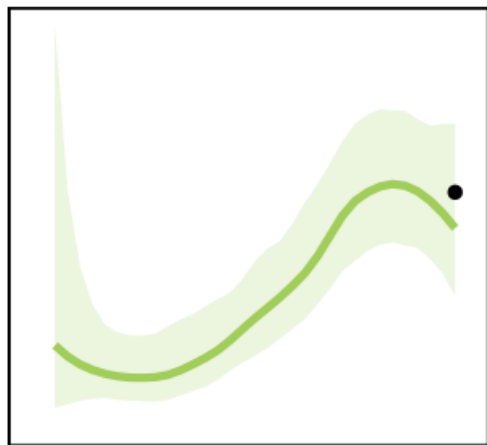


- Since 2005
- 17 characteristic grassland butterflies
- Both rare and widespread species
- Build indicator
- Nature Restoration Regulation

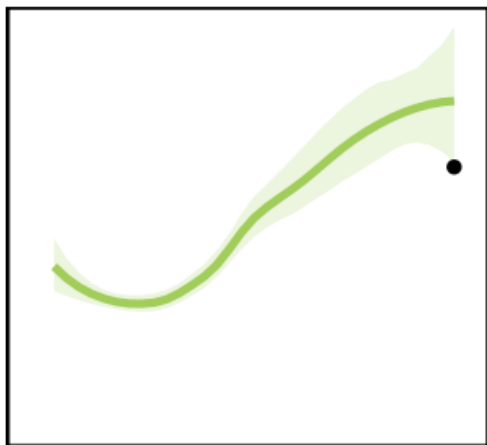




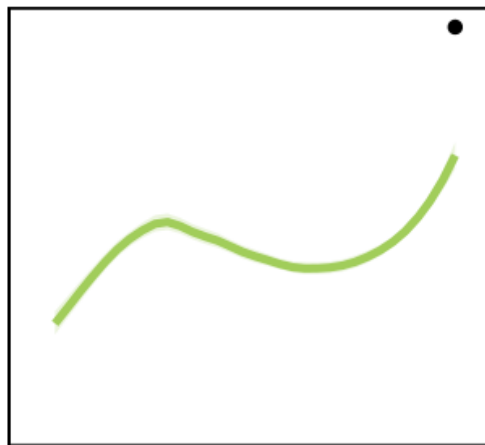
Erynnis tages



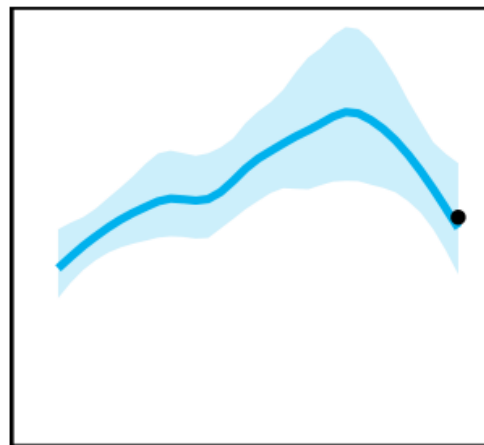
Anthocharis cardamines



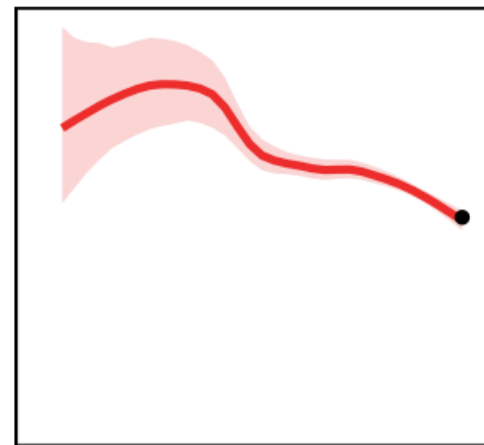
Coenonympha pamphilus



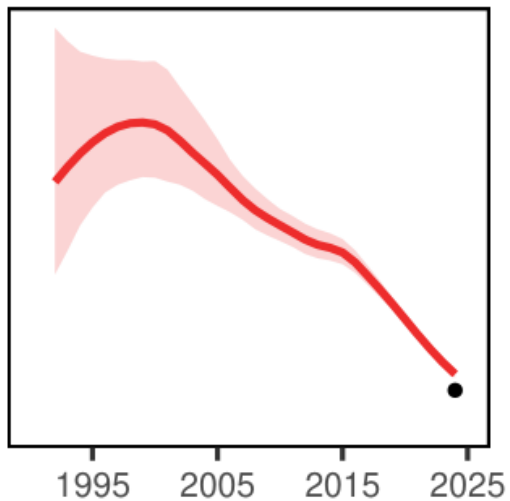
Lycaena phlaeas



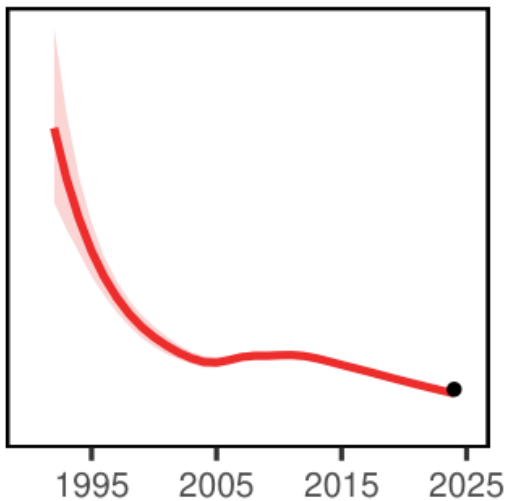
Maniola jurtina



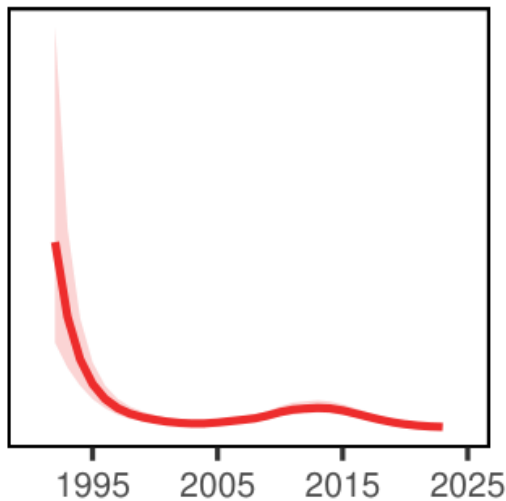
Polyommatus icarus



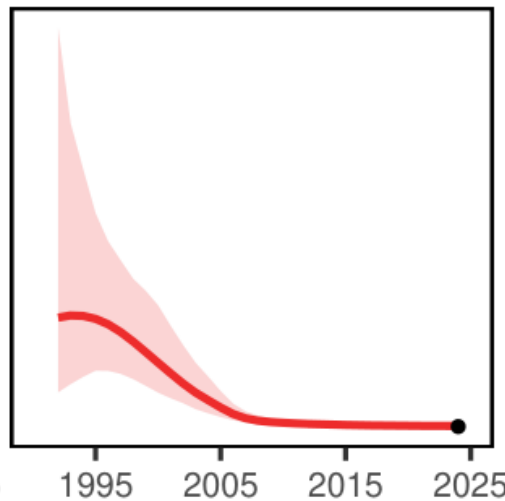
Ochlodes sylvanus



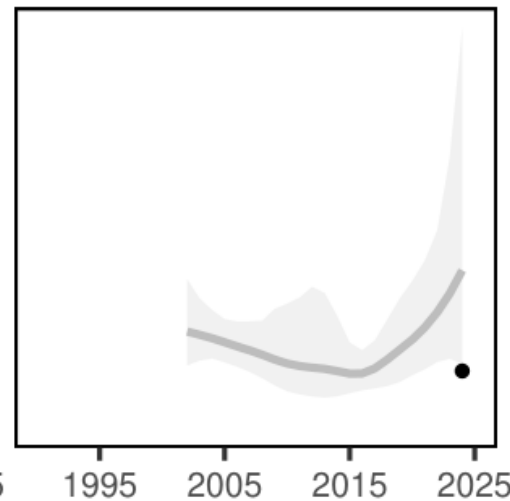
Phengaris nausithous



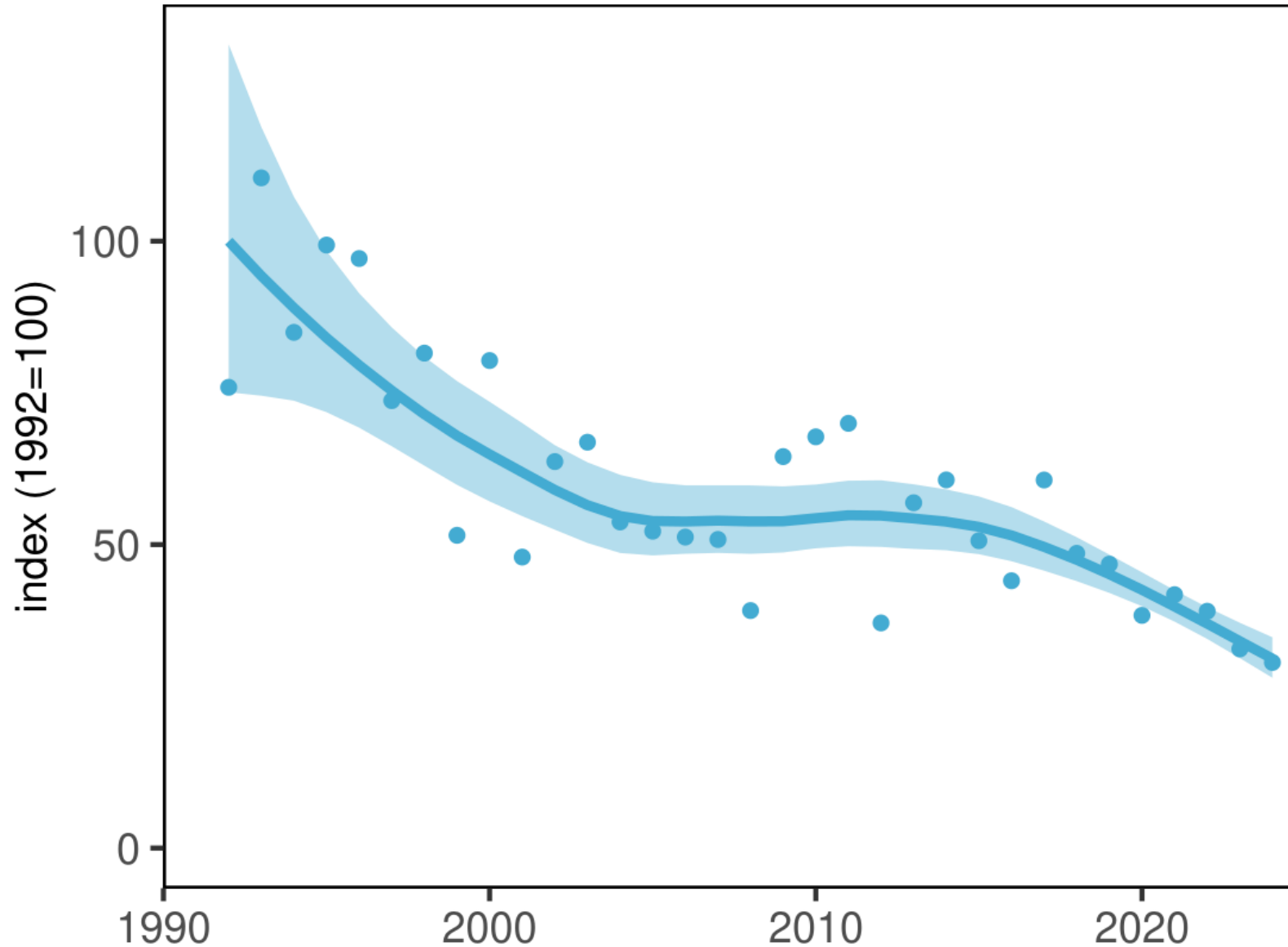
Lasiommata megera



Cyaniris semiargus

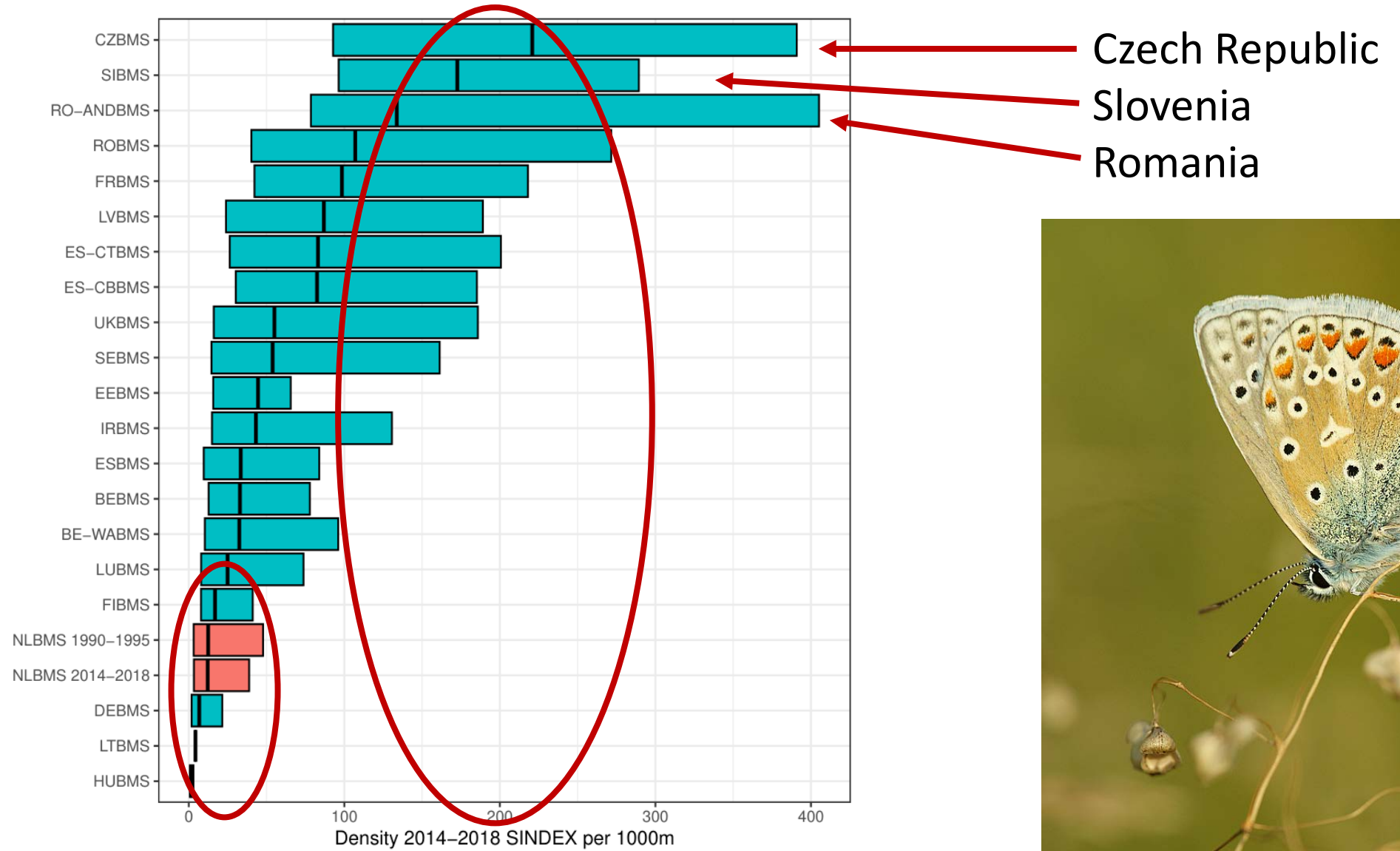


Dutch Grassland Butterfly Index

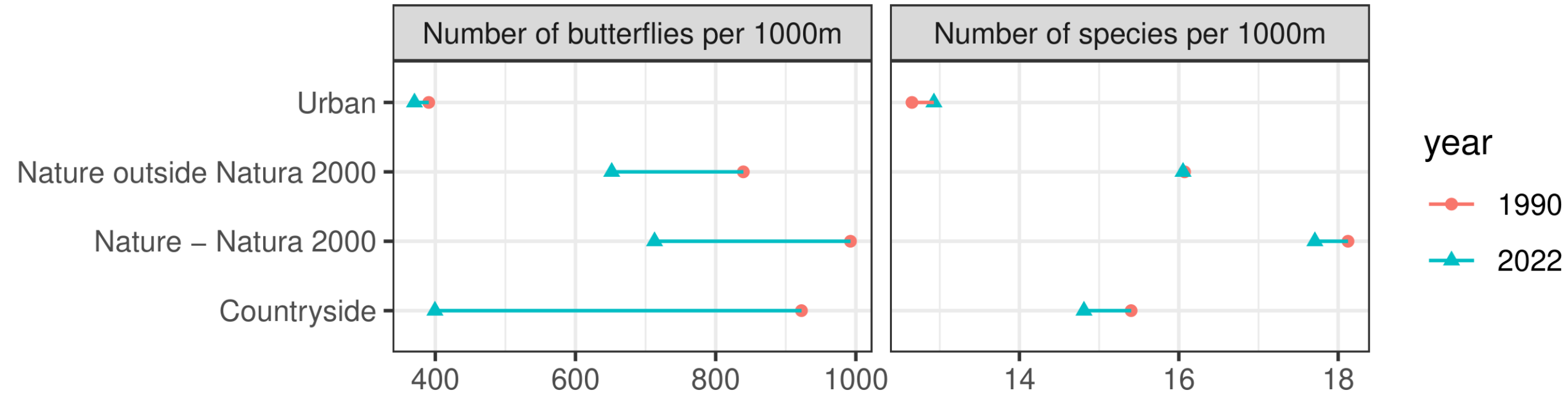


Density:

Number of butterflies per 1000m per year if every week would be counted



Total number of butterflies and species

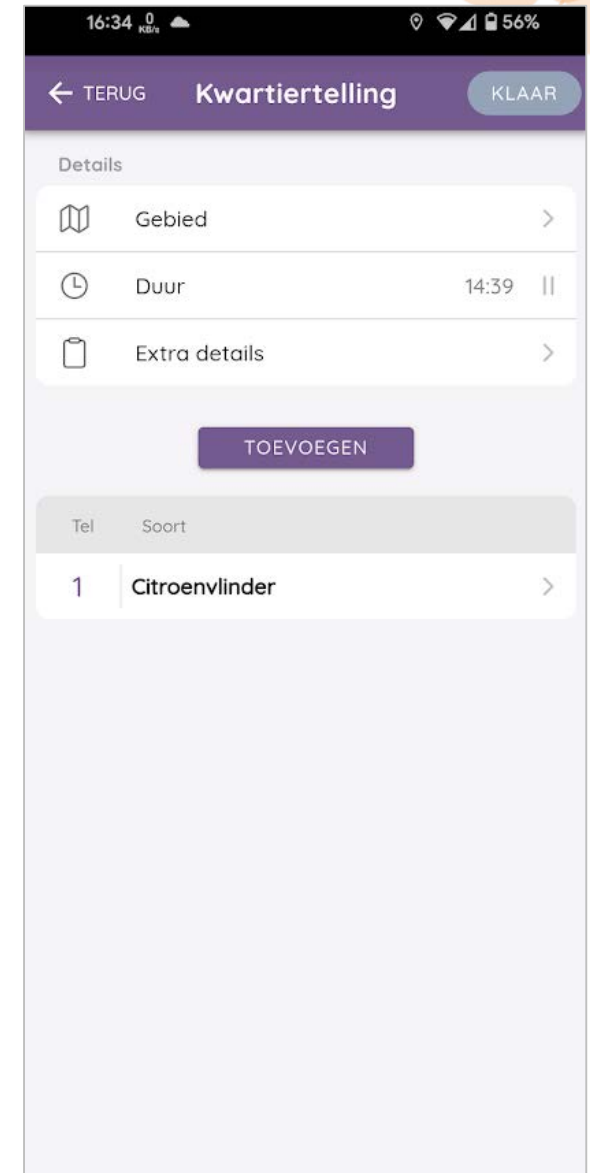
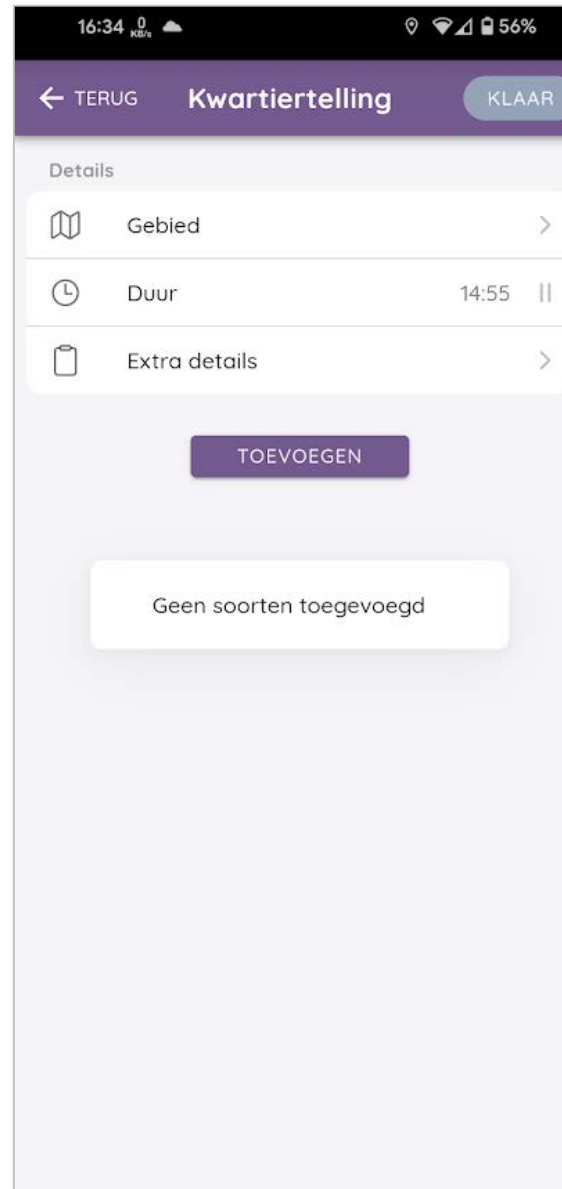
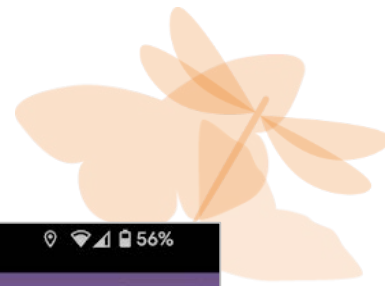


Tagfiltermonitoring

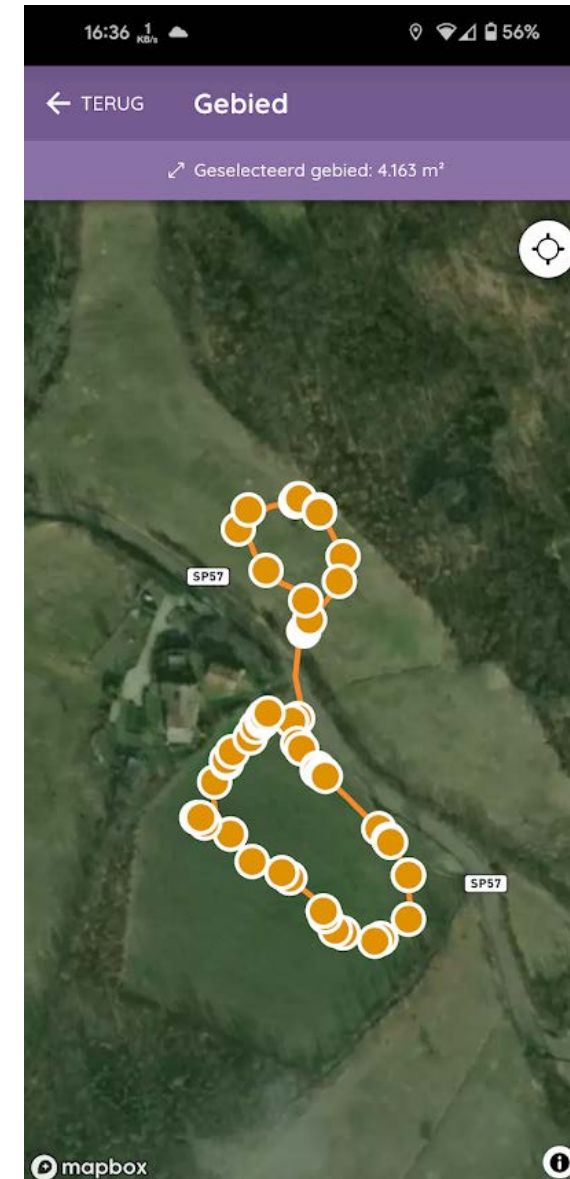
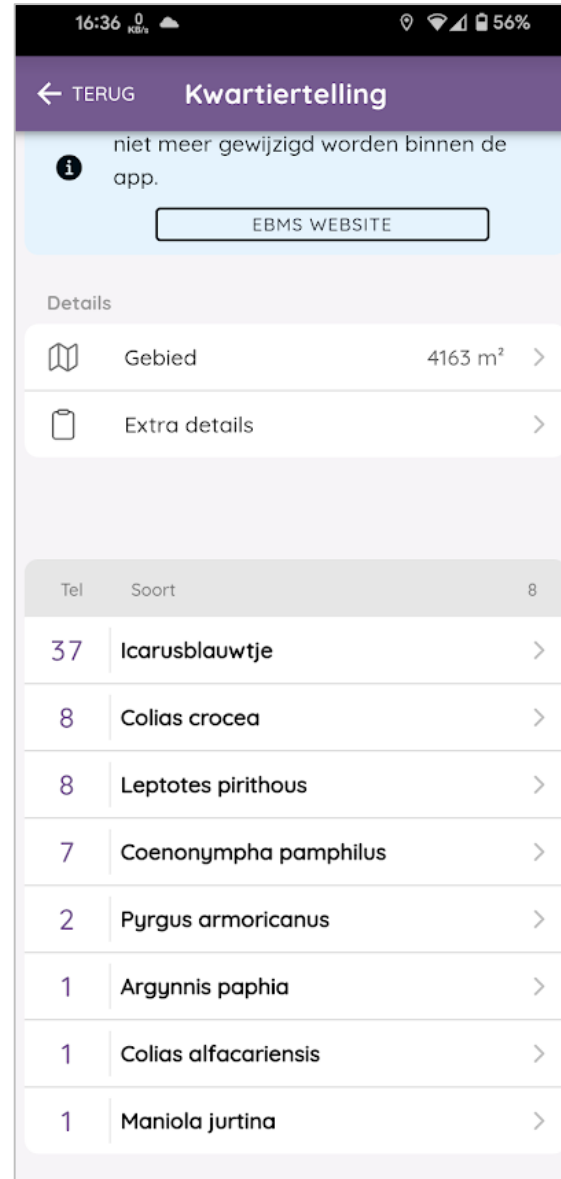
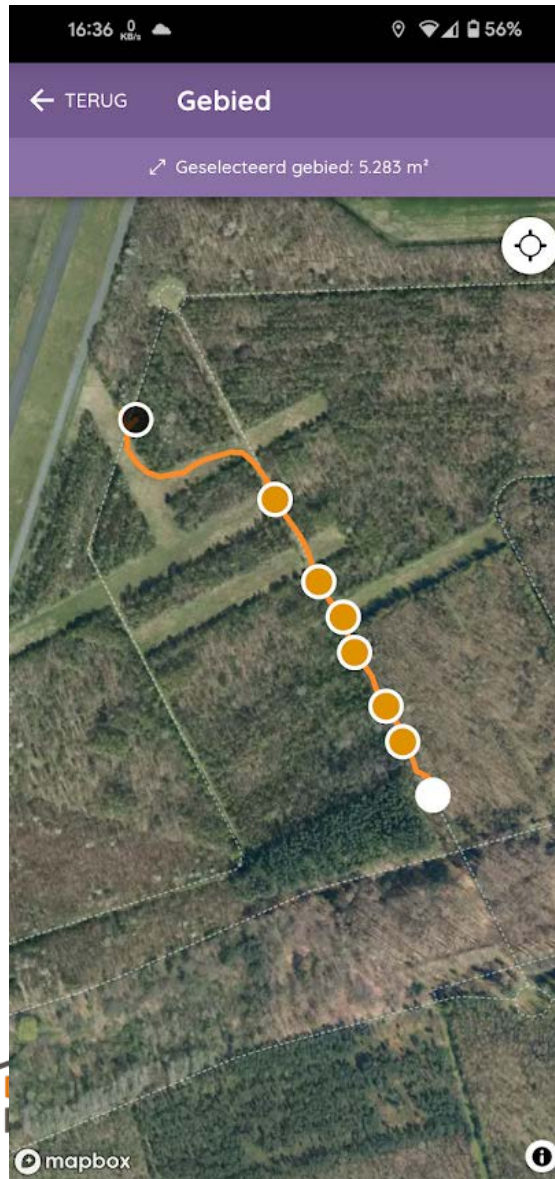


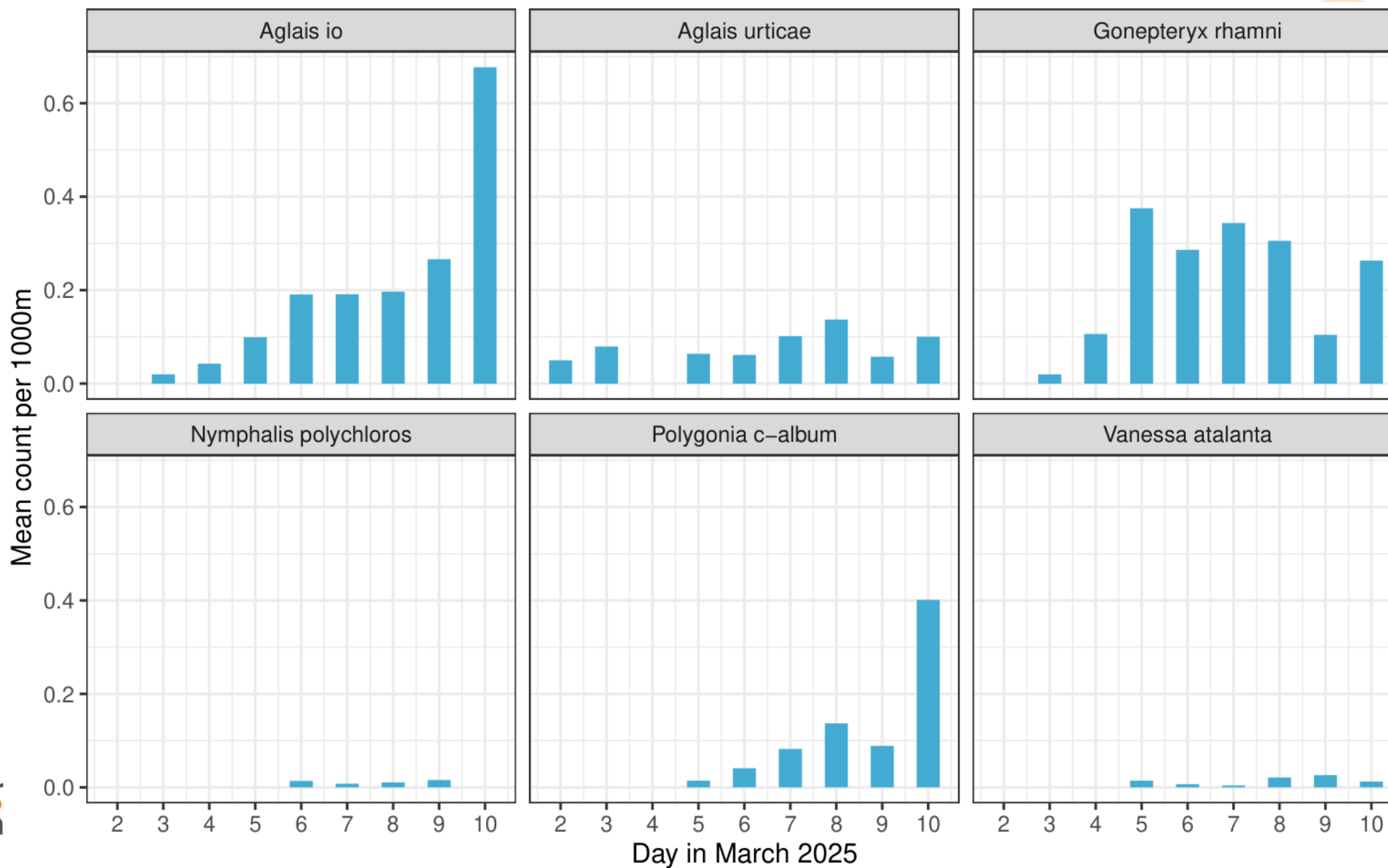
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15 minute counts



15 minute counts

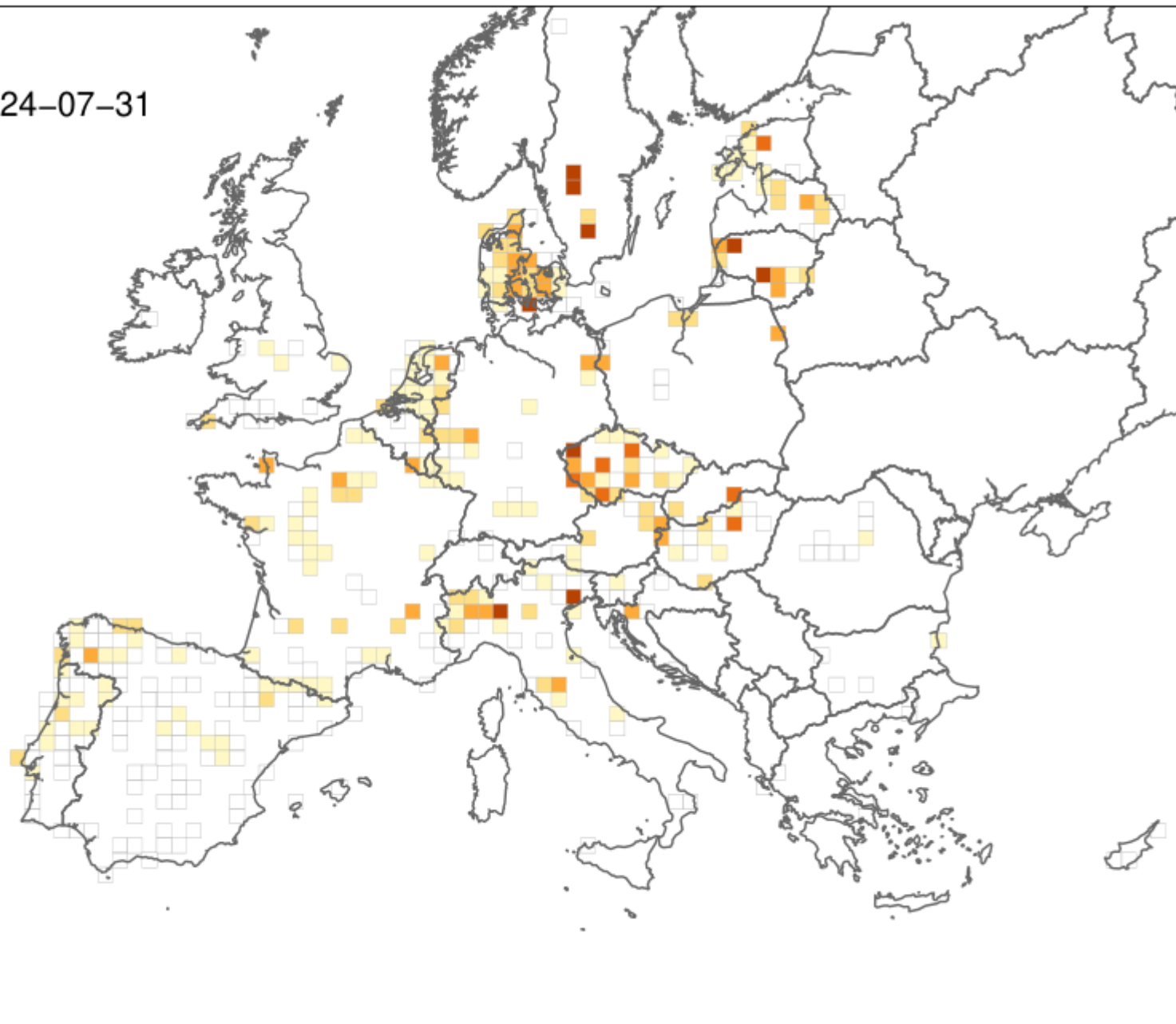




Pieris napi

2024-07-01 to 2024-07-31

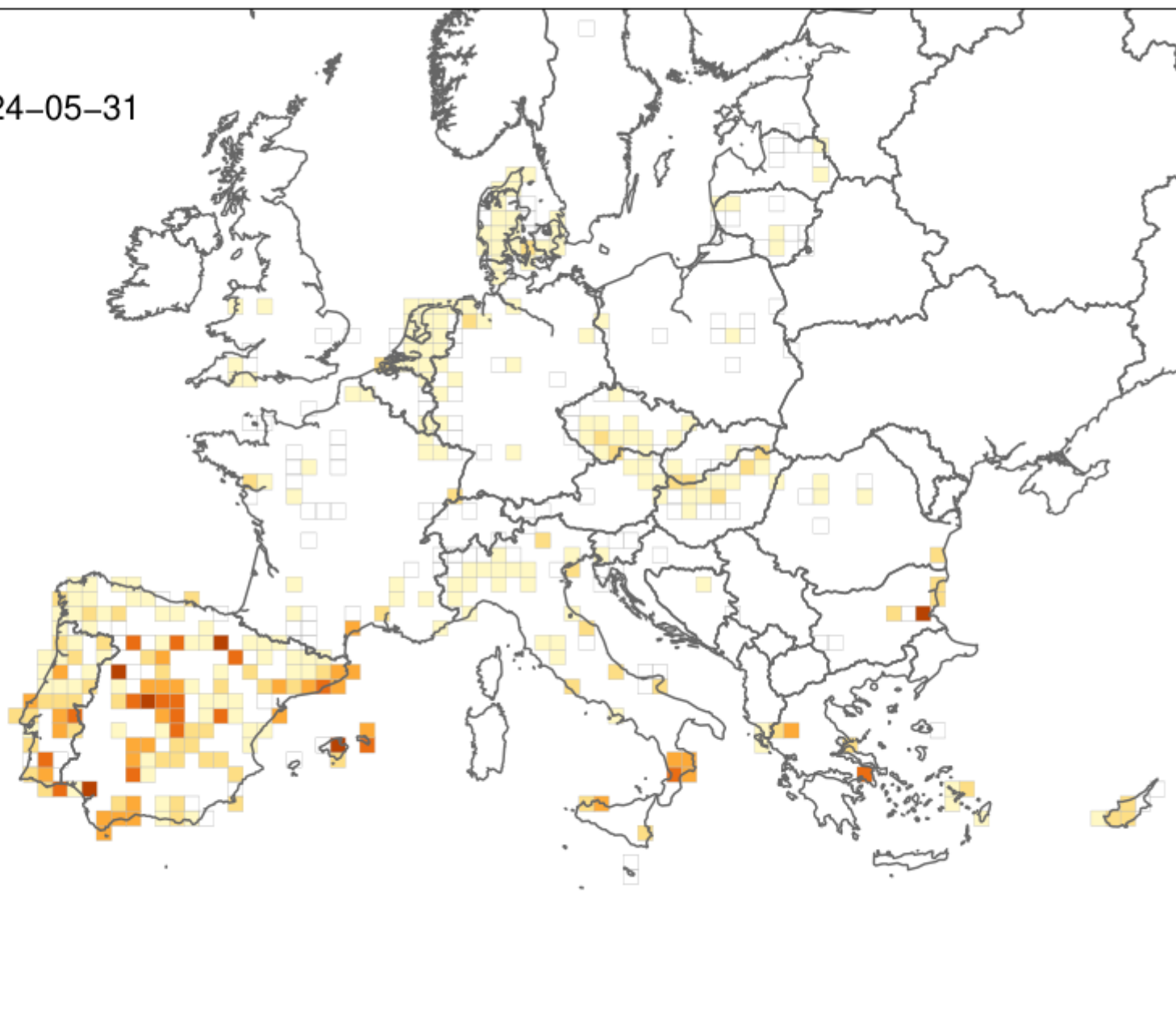
- 0 to 2
- 2 to 4
- 4 to 7
- 7 to 10
- 10 to 17



Pieris rapae

2024-03-01 to 2024-05-31

- 0 to 2
- 2 to 6
- 6 to 13
- 13 to 22
- 22 to 45

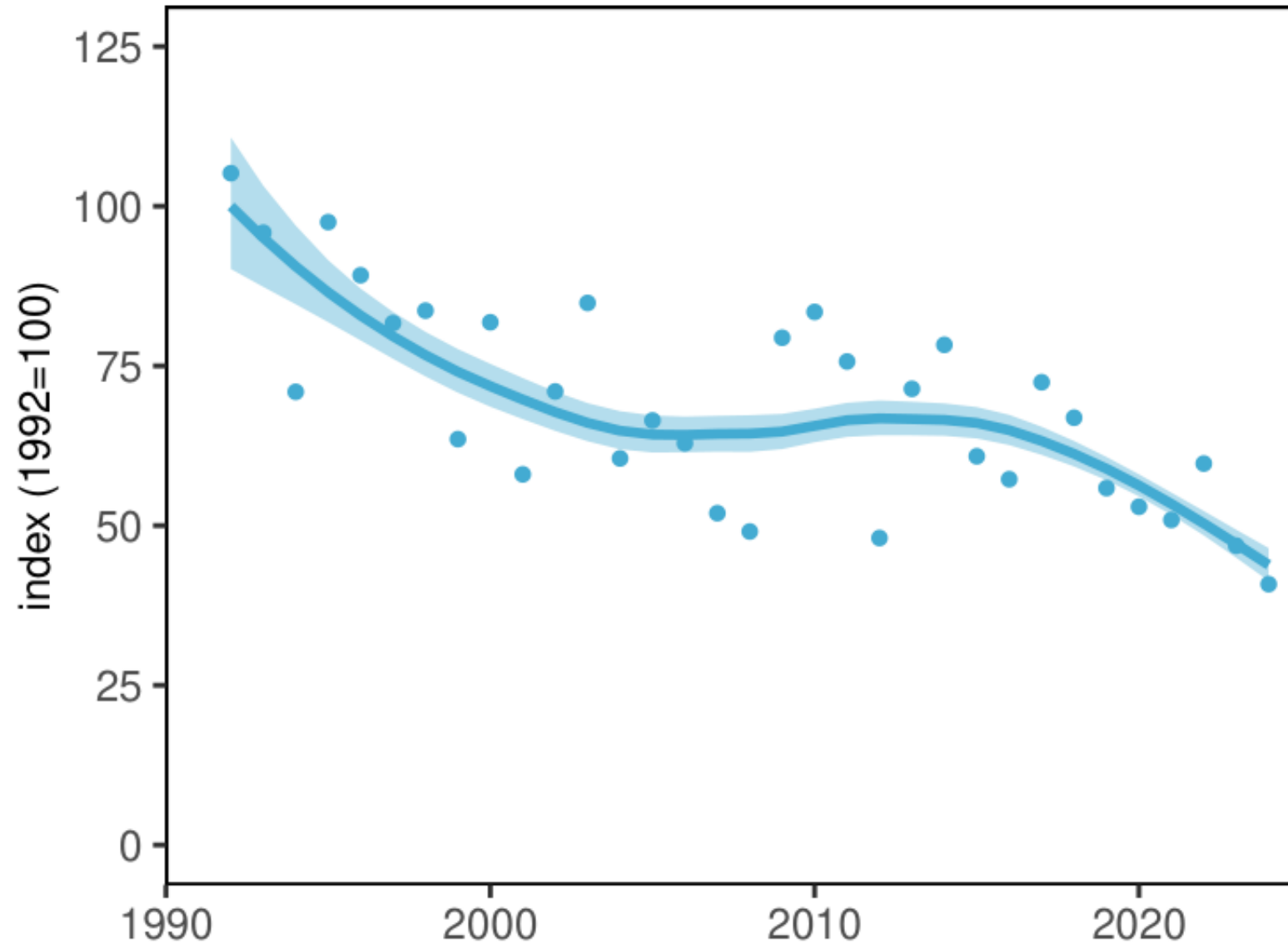


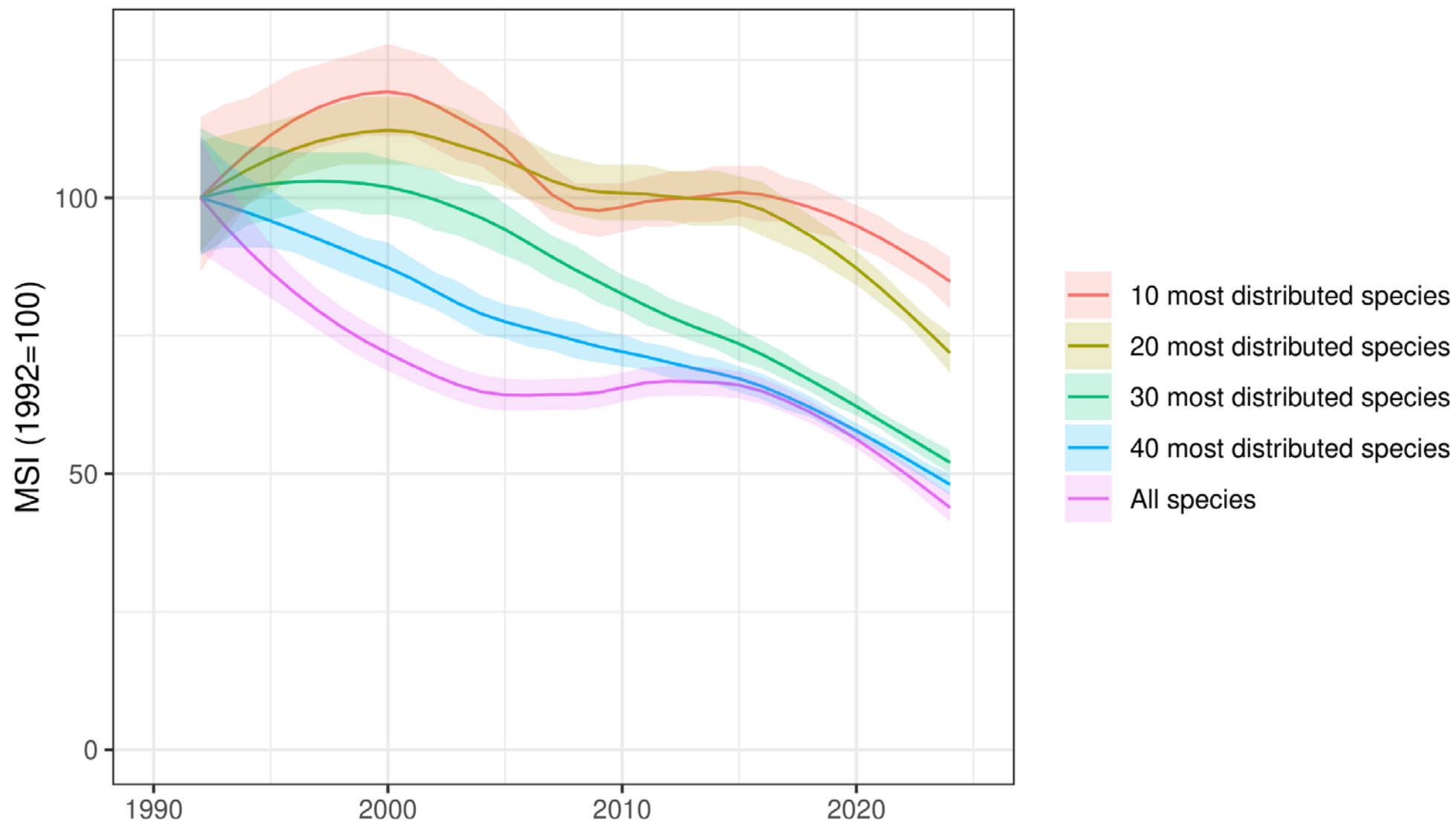
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Indicator for all butterflies in Netherlands





Rare species matter



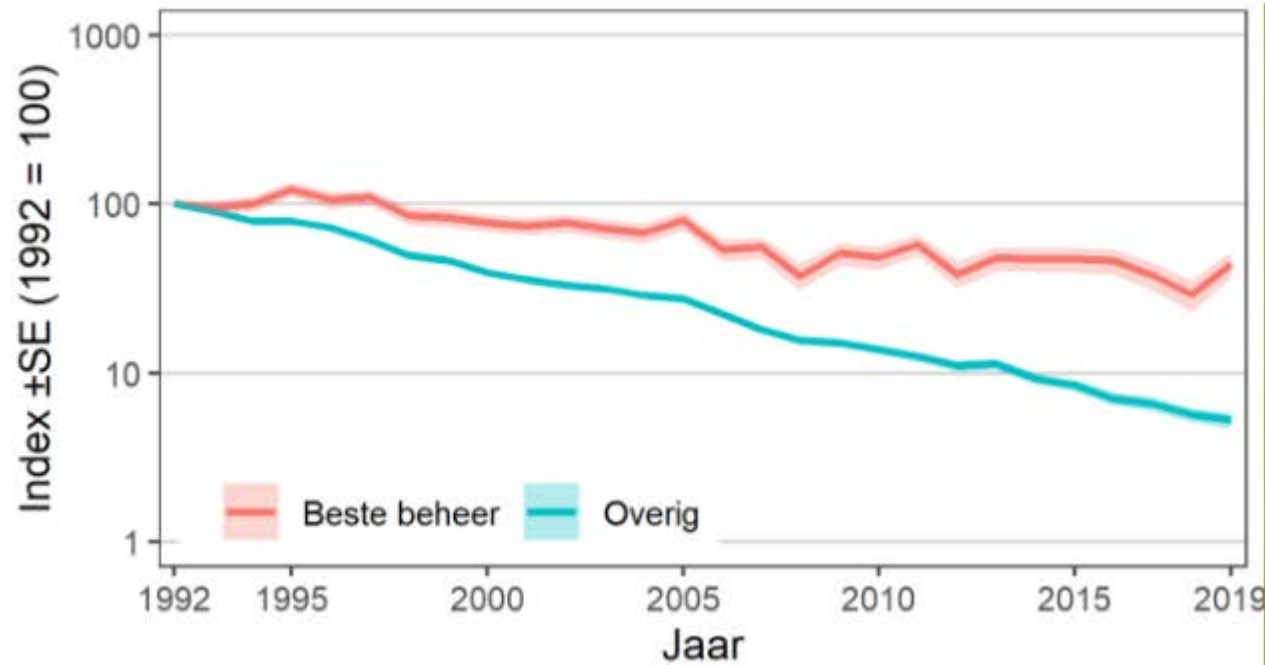
- In an indicator (LPI type) all species have the same weight
- So *Maniola jurtina* = *Agriades optilete*
- Consider counting only 3-4-5 times in the flight period

Tagfaltermonitoring

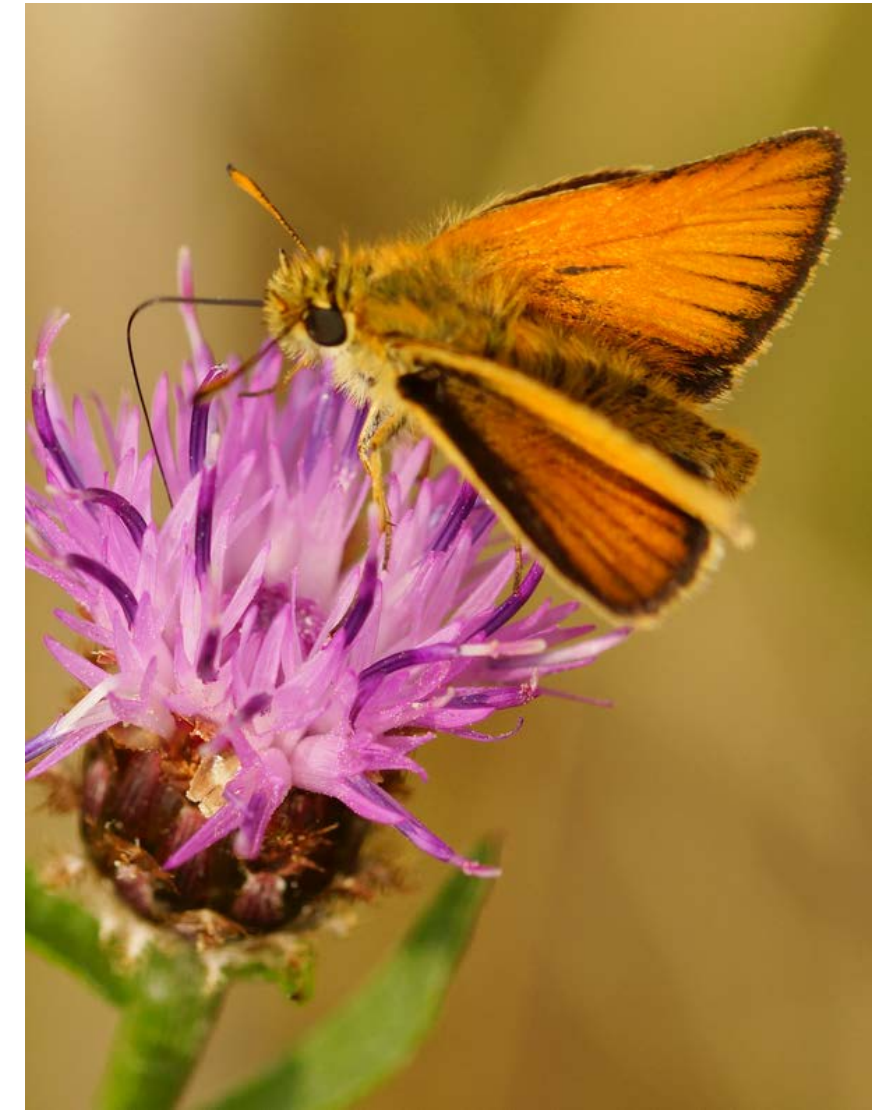
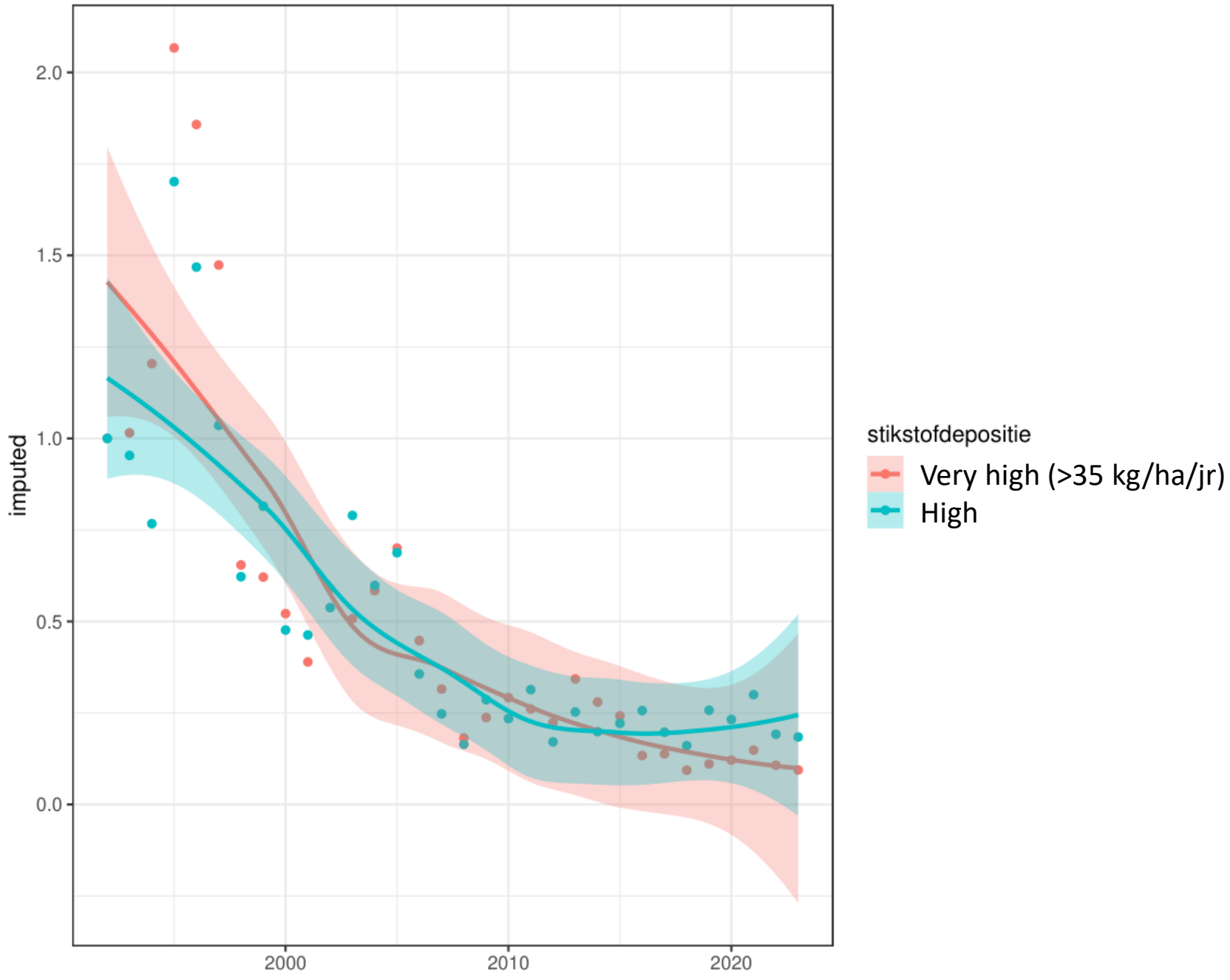


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Best management



Zoë Delamore



Tagfalter monitoring



- Why you should monitor
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- **Why your government needs monitoring results**

Butterfly results needed for:

- Convention on Biological Diversity
- Bern convention
- Habitats Directive
 - Article 17 reports
 - Standard data form (per Natura 2000 area)
 - Typical species Annex I habitats
- Nature Restoration Regulation
 - Grassland Butterfly Index (GBI)
 - Pollinator monitoring (EUPOMS)
 - National restoration plans





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