



Workshop Butterfly Monitoring

Introduction



UK Centre for
Ecology & Hydrology



We have come a long way





**A METHOD OF ASSESSING THE ABUNDANCE OF
BUTTERFLIES IN MONKS WOOD NATIONAL NATURE
RESERVE IN 1973**

*By E. POLLARD, D. O. ELIAS, M. J. SKELTON & J. A. THOMAS
Monks Wood Experimental Station,* Abbots Ripton, Huntingdon*

There is a need for a simple reliable method of recording the abundance of butterflies in nature reserves and similar places so that changes from year to year can be assessed. The method described



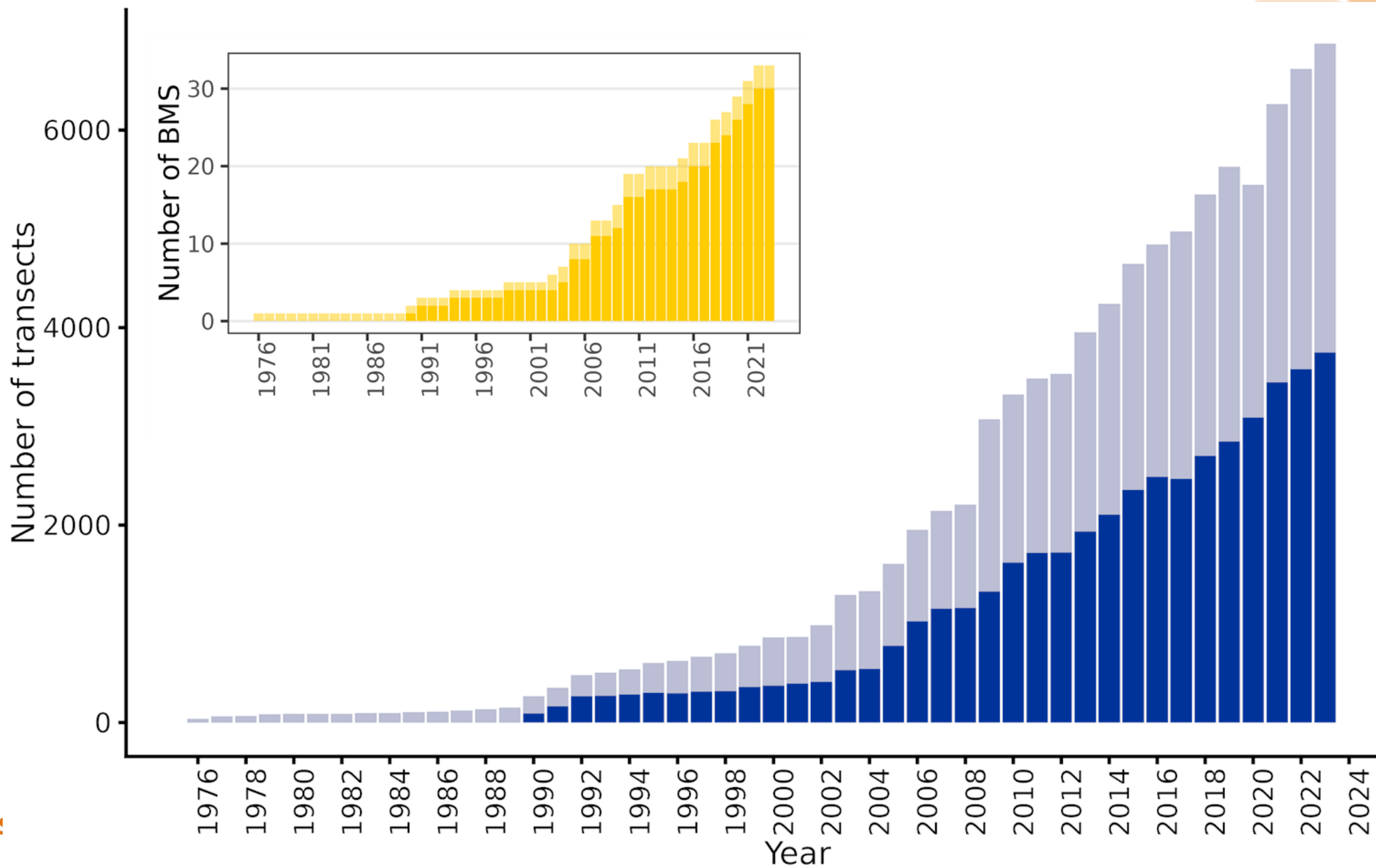
A METHOD FOR ASSESSING CHANGES IN THE ABUNDANCE OF BUTTERFLIES

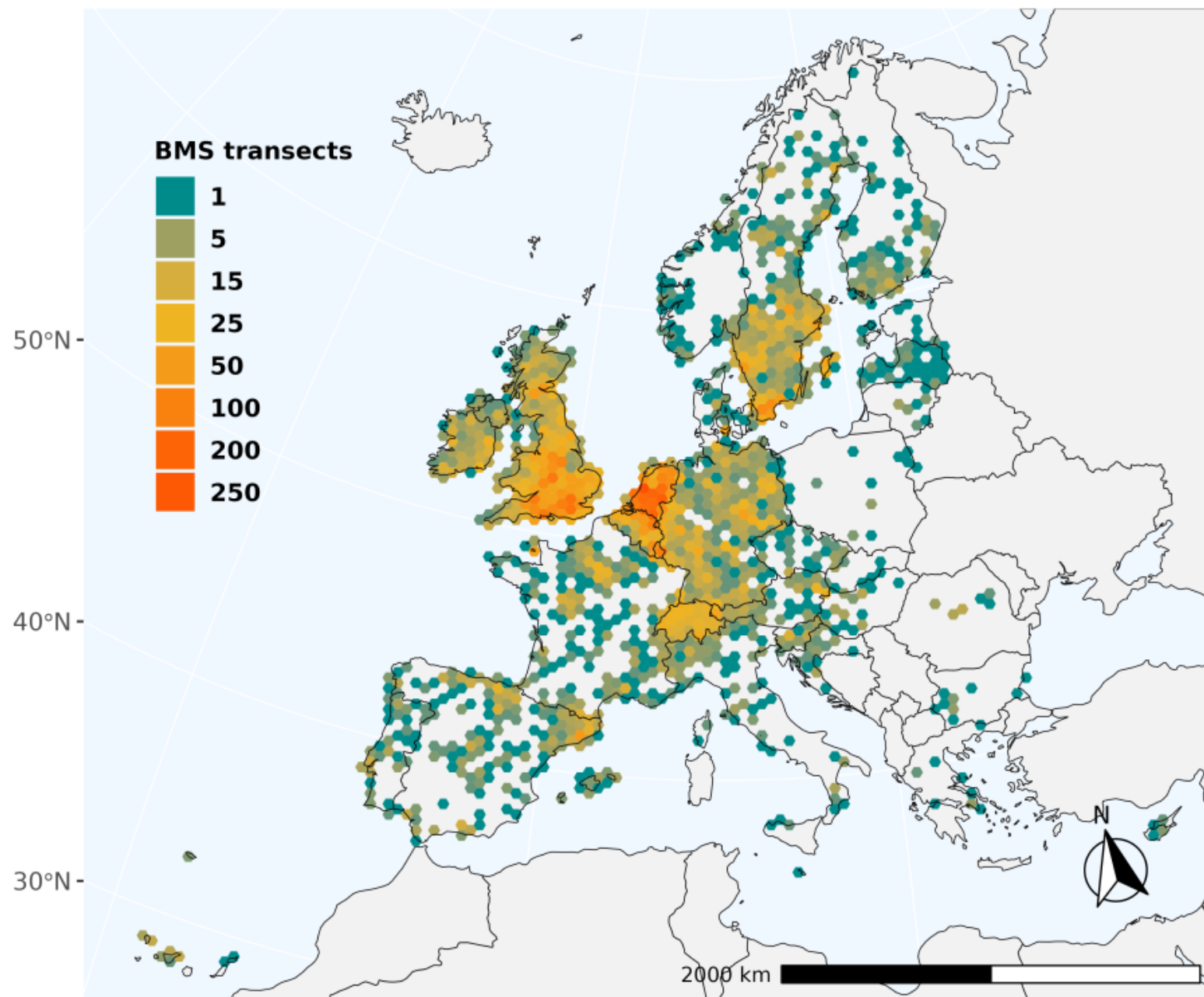
E. POLLARD

*Natural Environment Research Council, Institute of Terrestrial Ecology, Monks Wood Experimental
Station, Abbots Ripton, Huntingdon, PE17 2LS, Great Britain*

ABSTRACT

A method based on transect counts has been developed to assess changes in abundance of butterflies from year to year. The method involves weekly walks around a transect route making counts of butterflies seen within defined limits. The transects are divided into sections related to habitat or management units. Walks are made only when weather conditions satisfy specified minimum requirements. The method has been tested for three years at Monks Wood and for two years at a number of other sites.





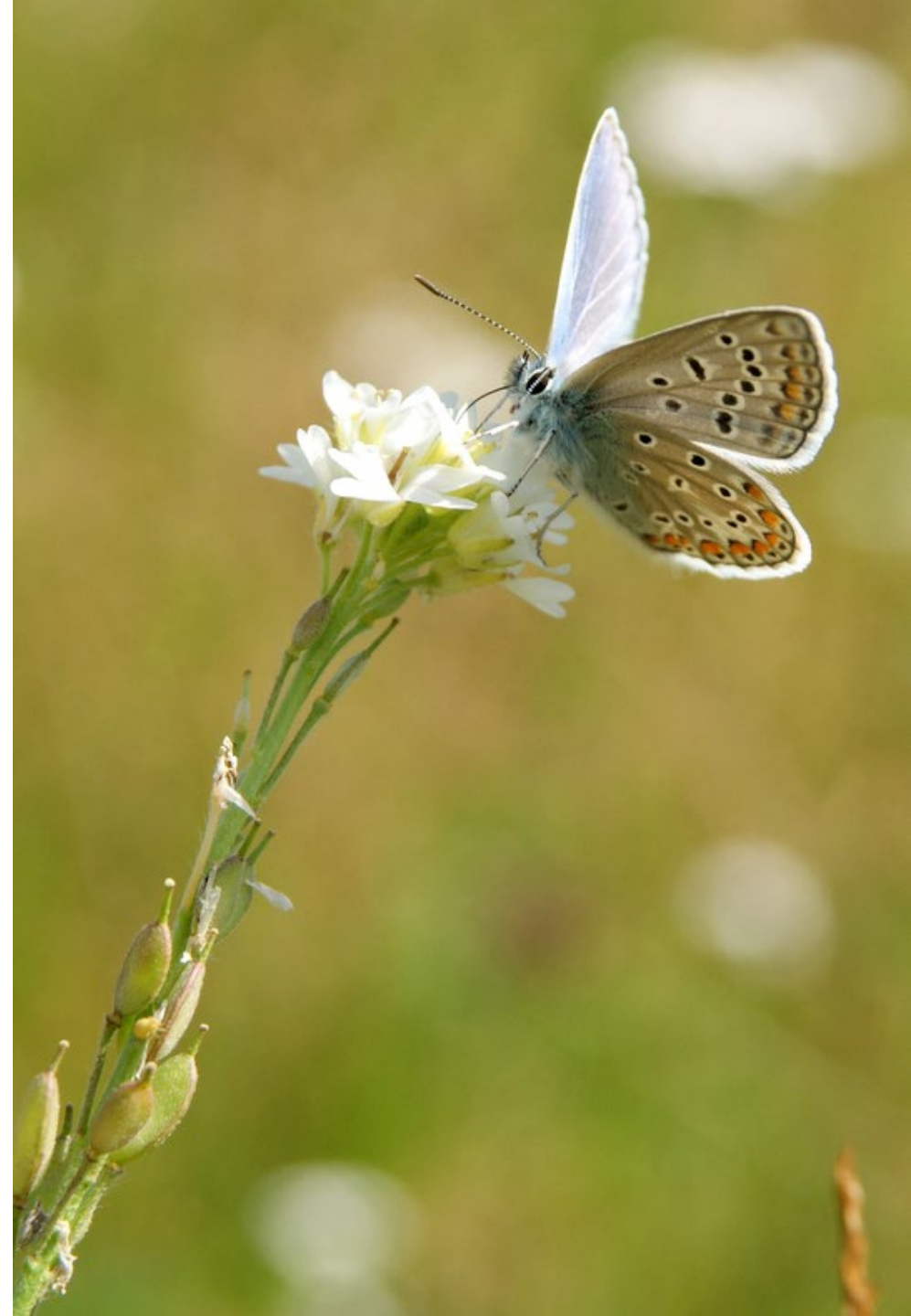
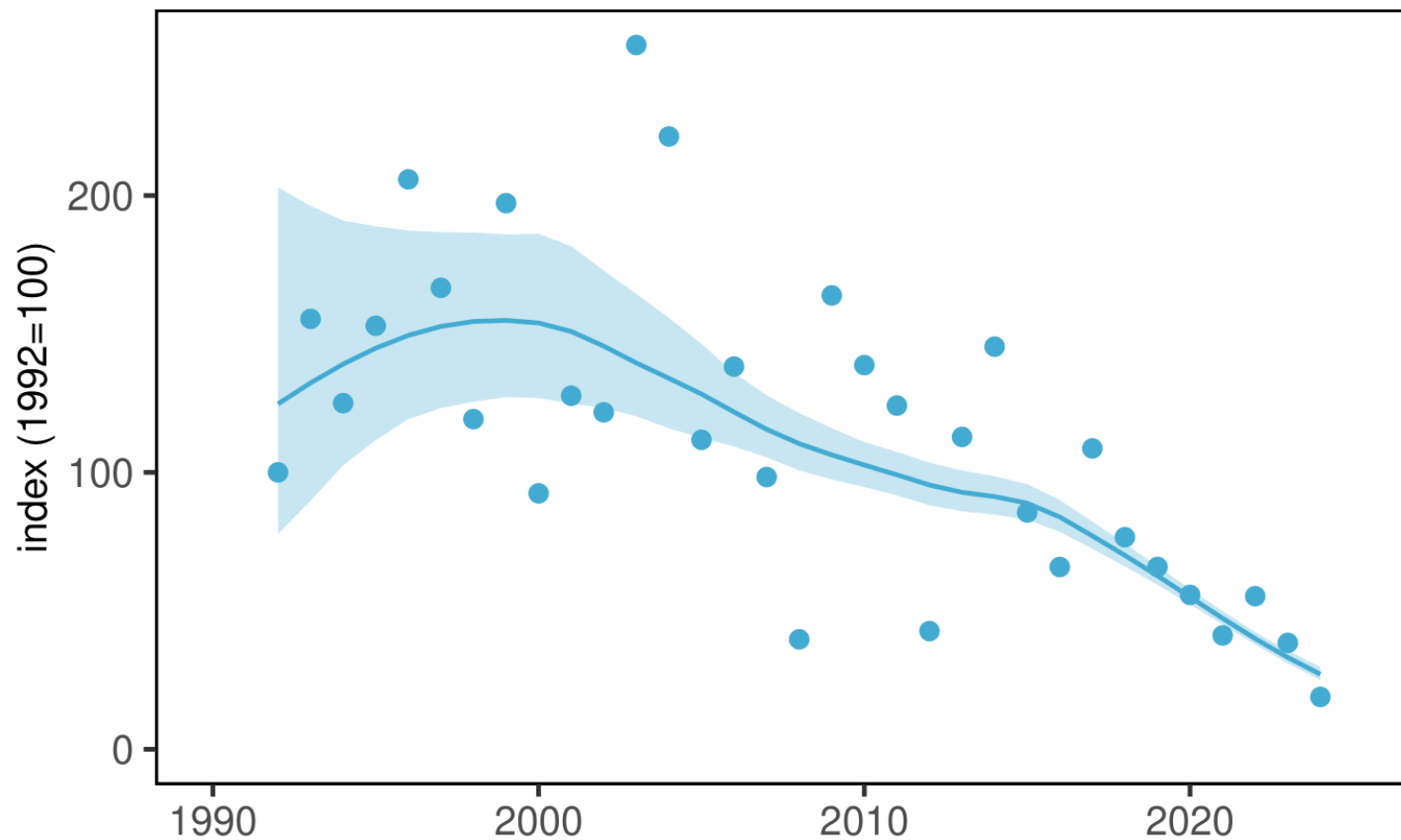
What have we gained?

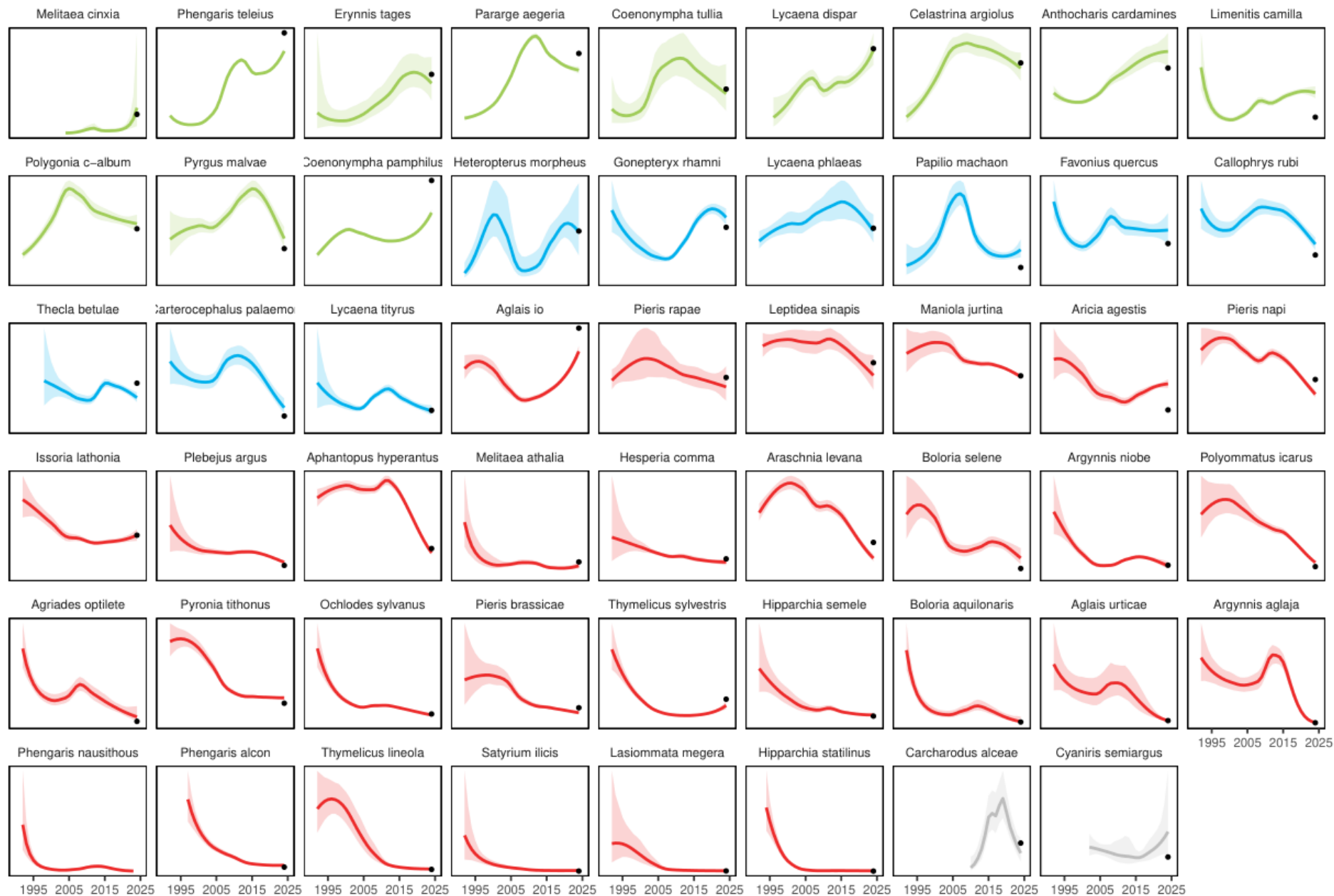


- Species trends

Polyommatus icarus

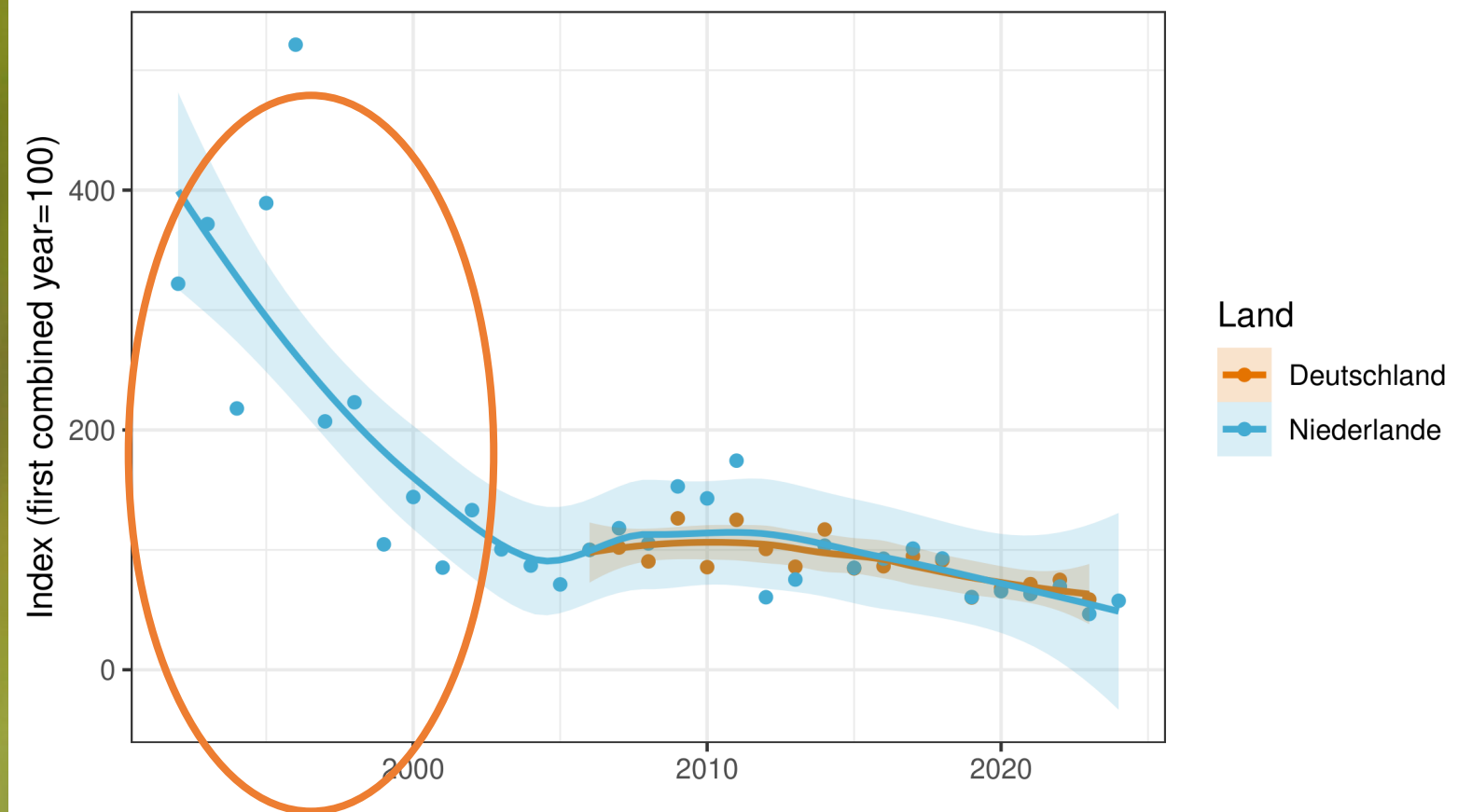
Icarusblauwtje







Ochlodes sylvanus



Shifting baseline?

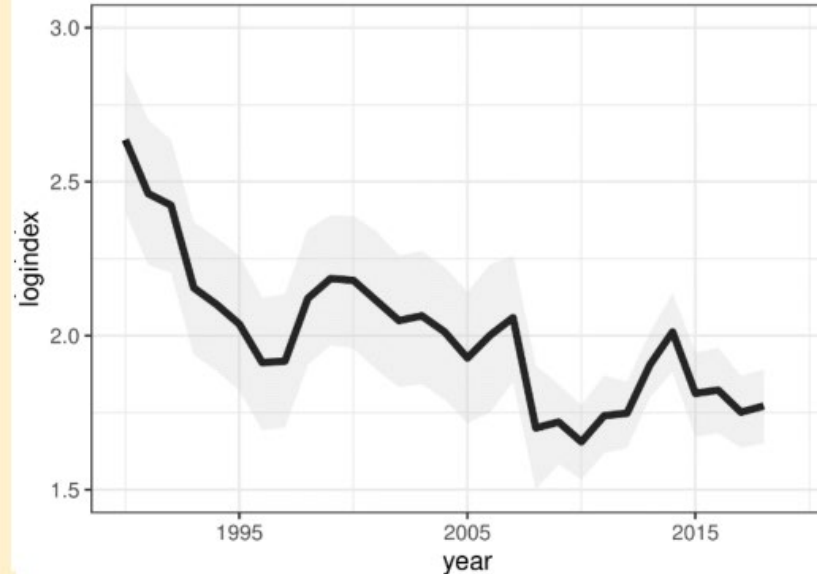
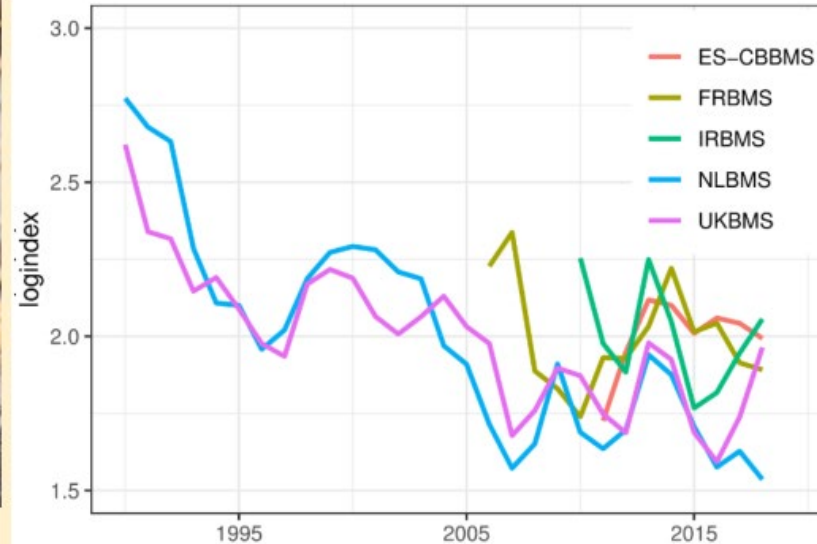
From national to European trends



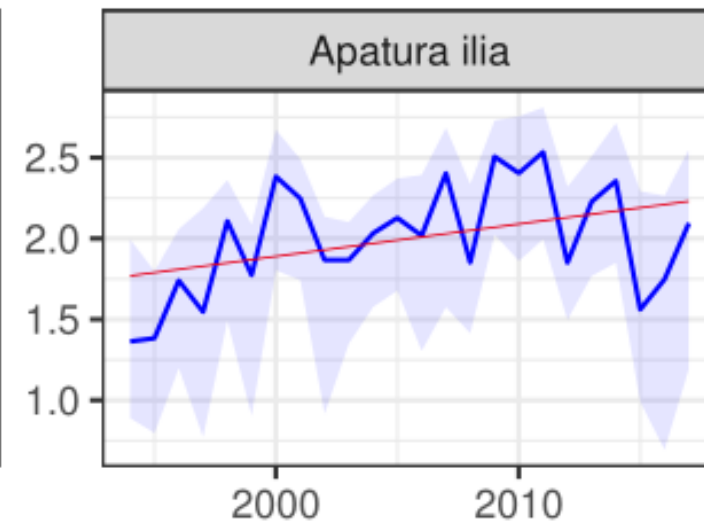
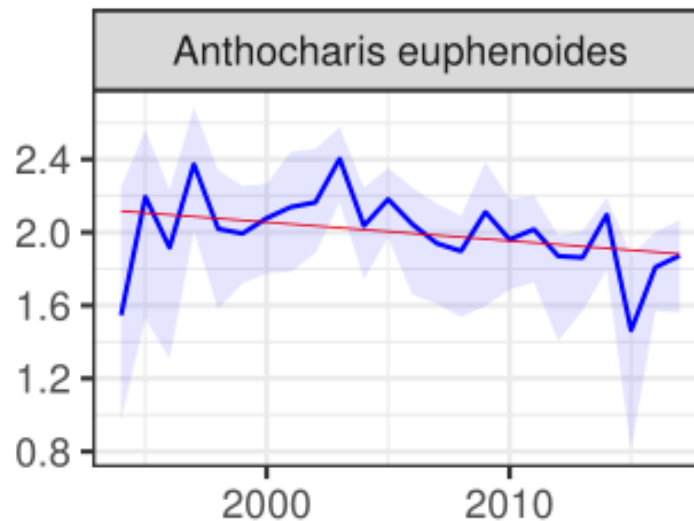
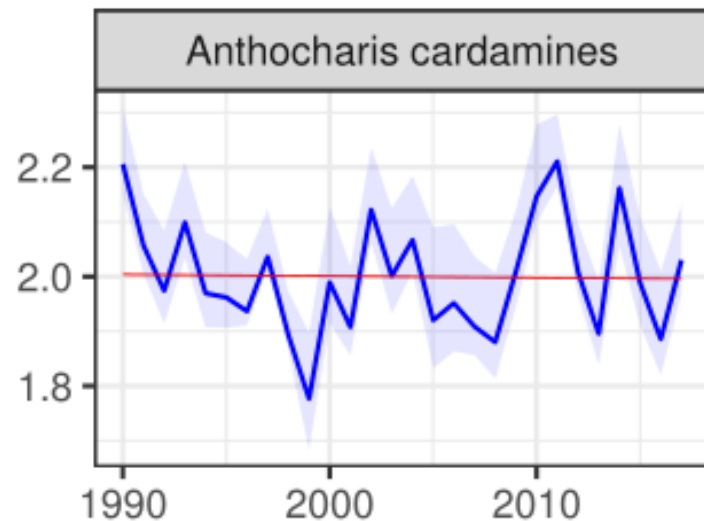
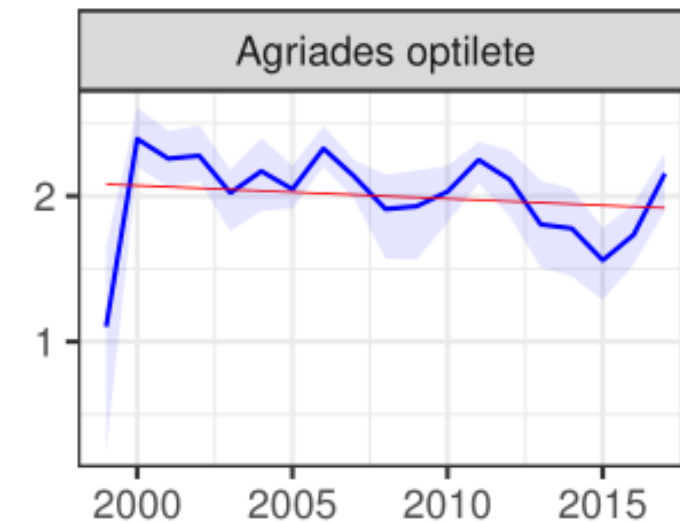
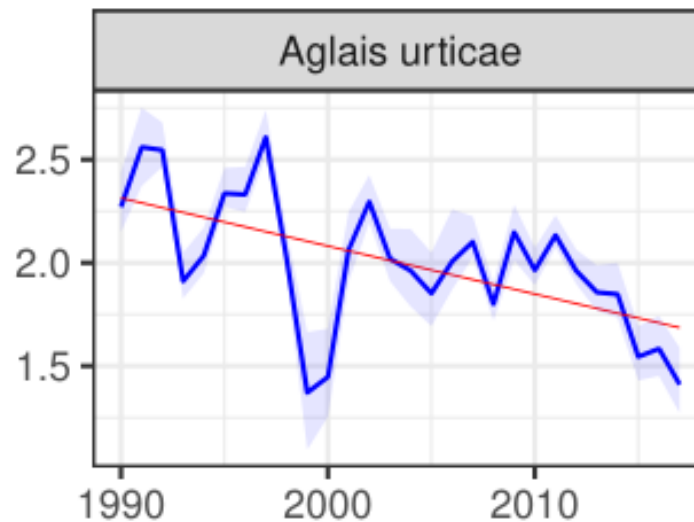
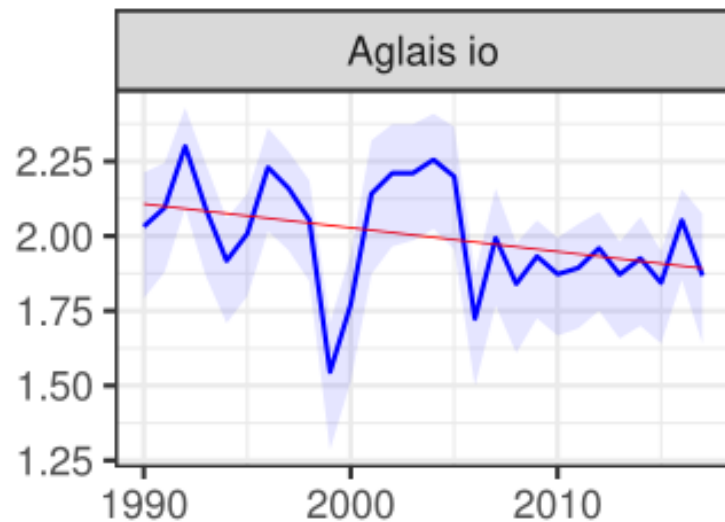
Box 1: Indices for *Lasiommata megera* in the Atlantic region.

The upper graph shows the relative abundance indices for five Butterfly Monitoring Schemes. Note that the starting year for each scheme is different.

The lower graph shows the species index and 95% confidence interval for the whole Atlantic region, resulting from all the Butterfly Monitoring Schemes in this region.



European speciestrends



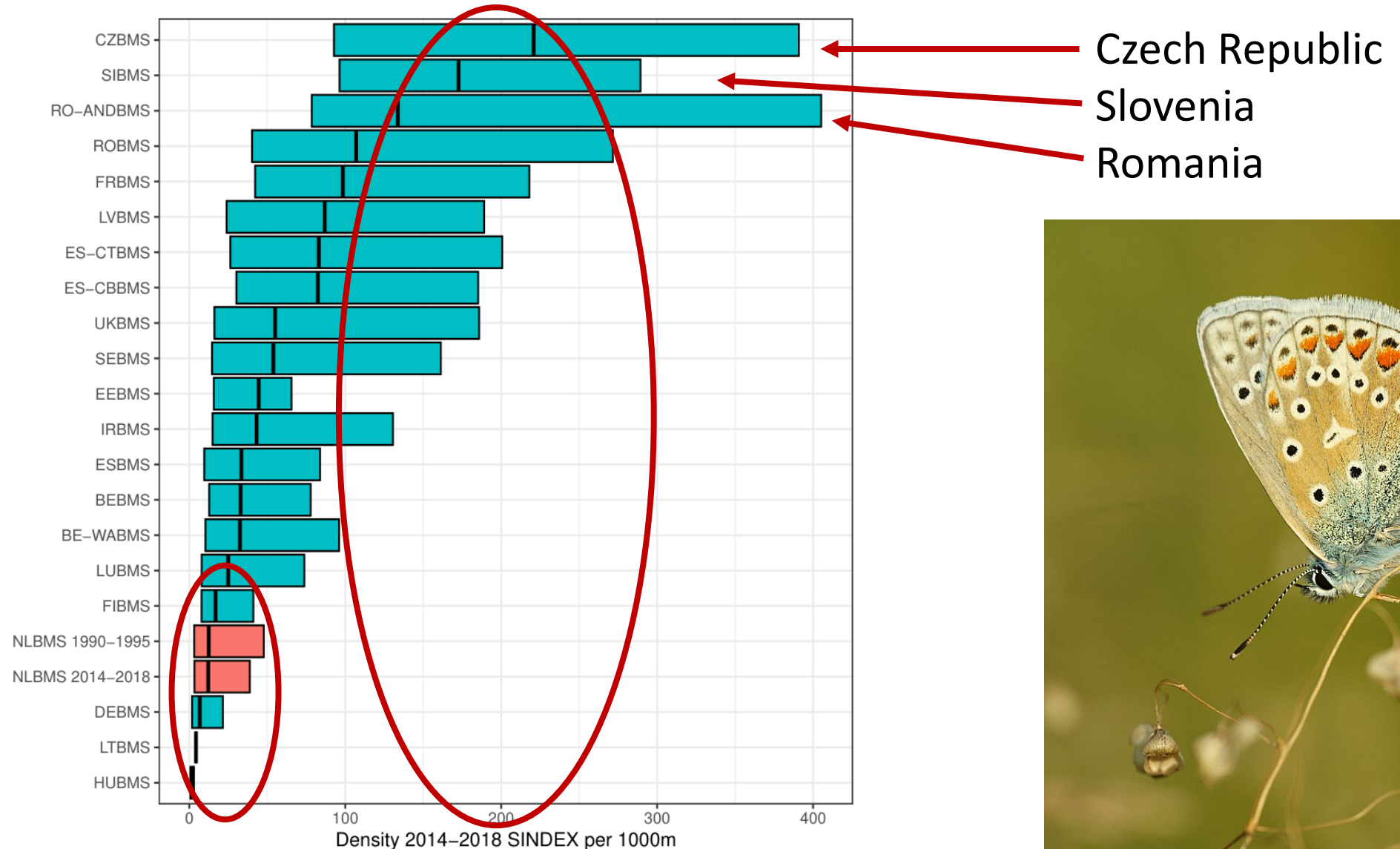
What have we gained?



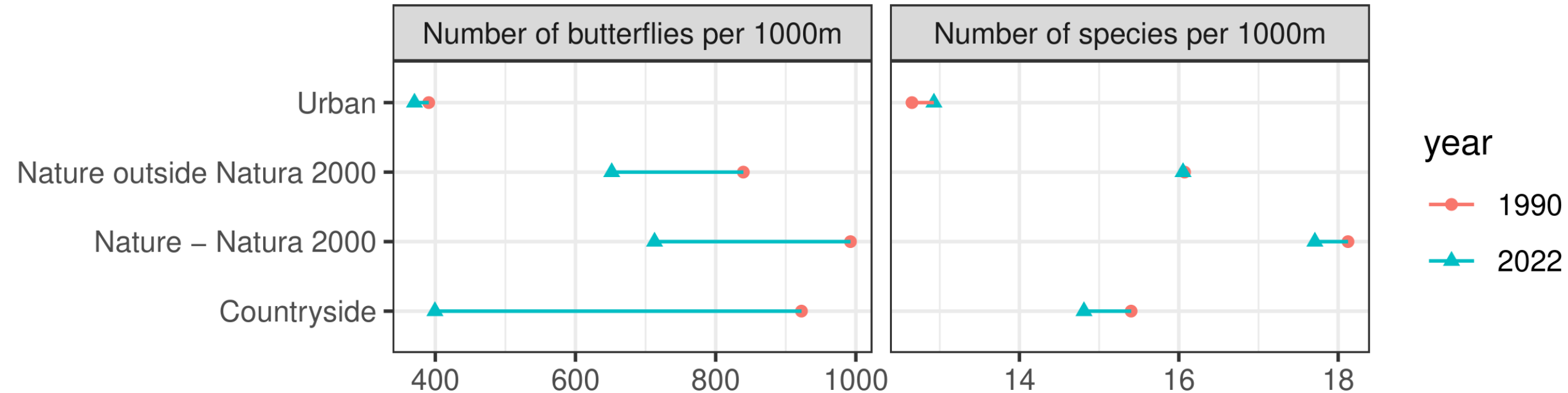
- Species trends
- Species abundance

Density:

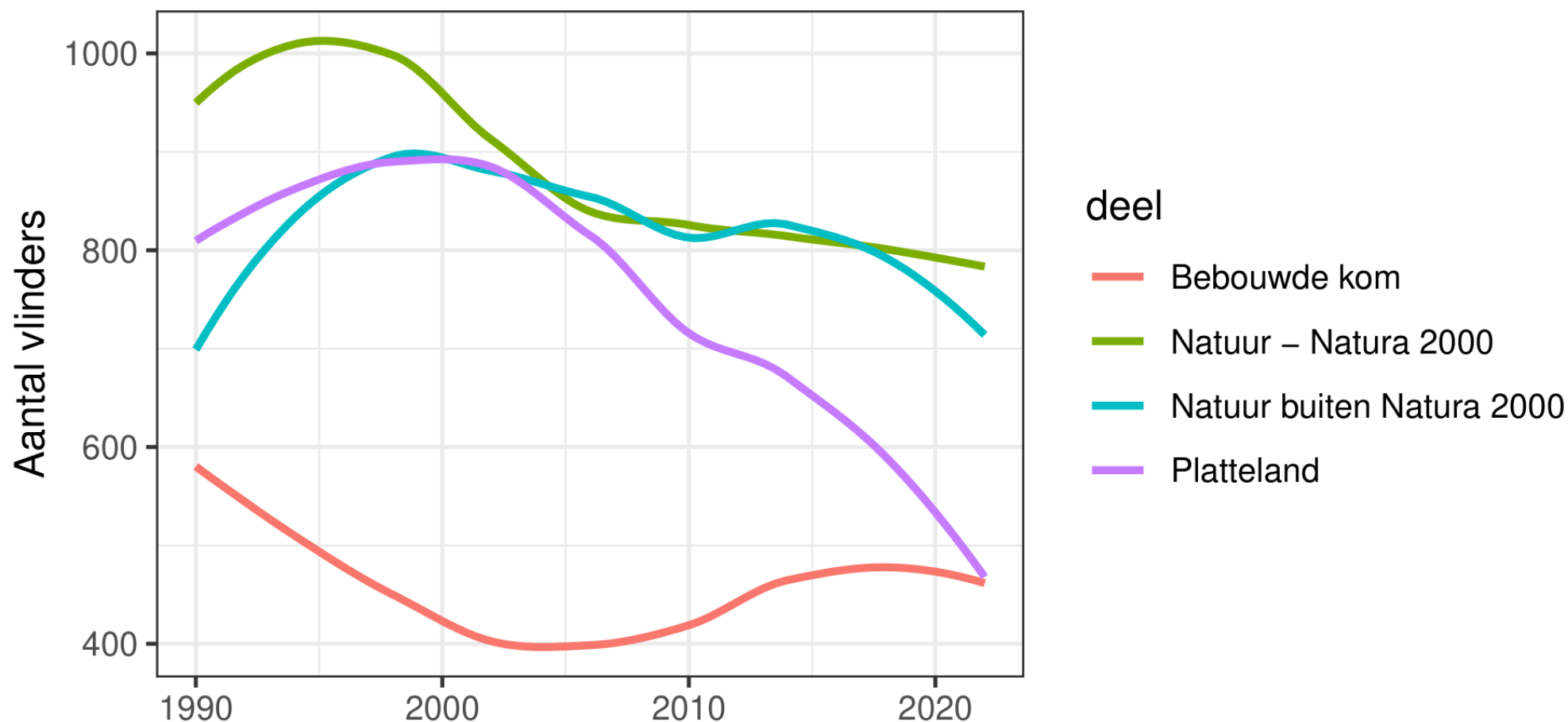
Number of butterflies per 1000m per year if every week would be counted



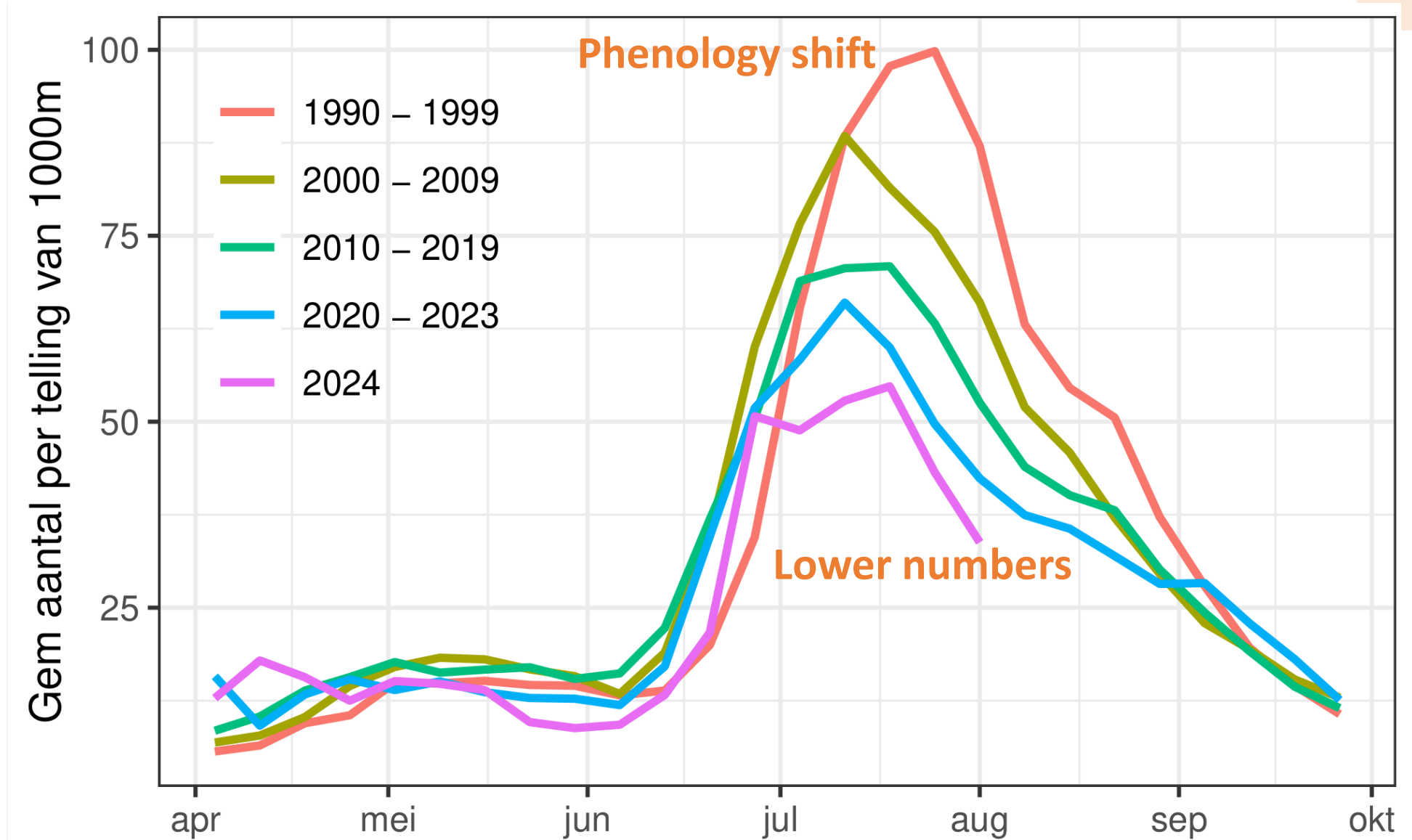
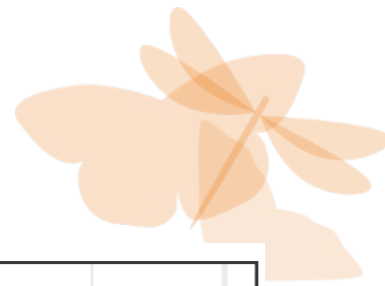
Total number of butterflies and species NL



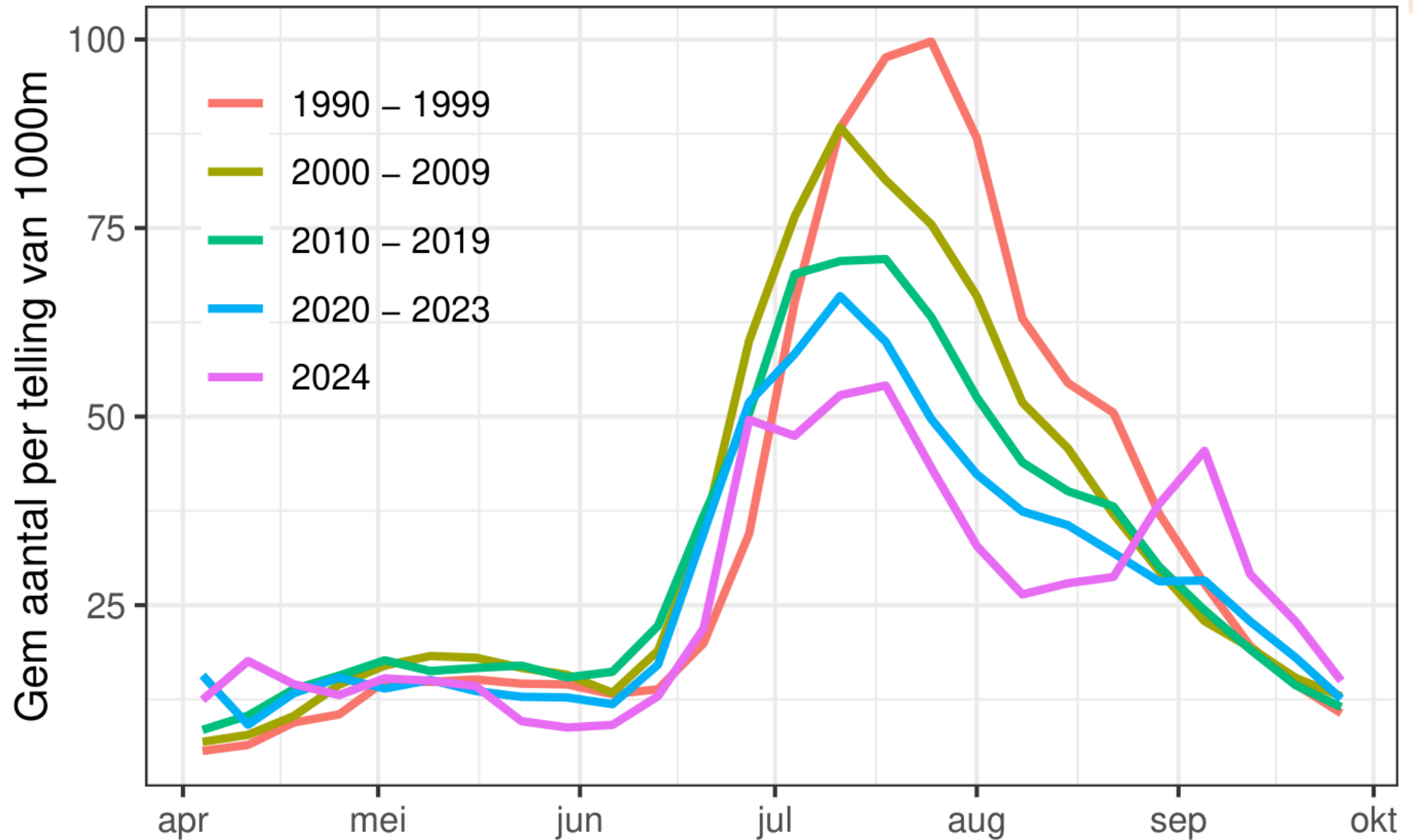
Total number of butterflies NL



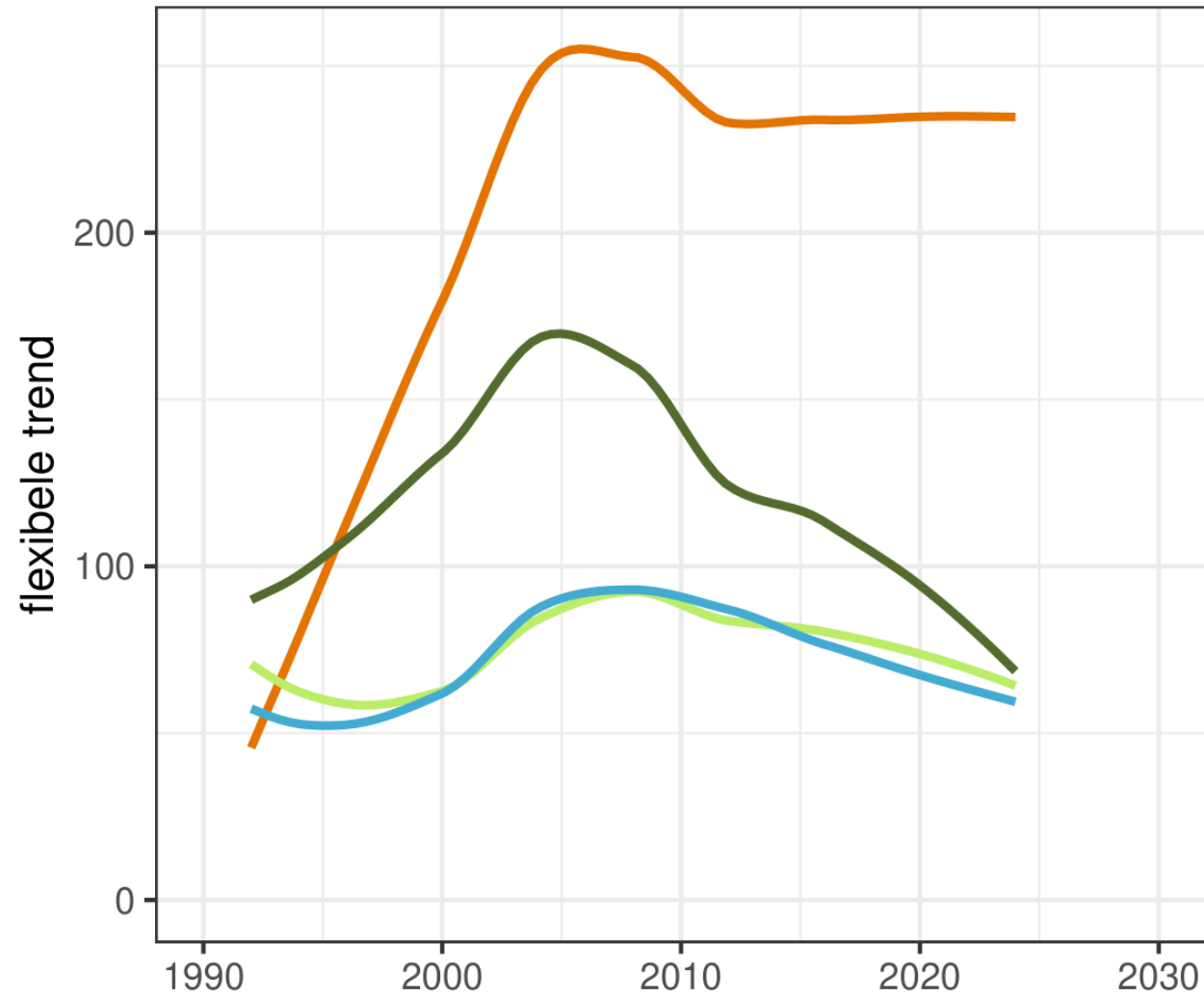
What is going on?



What is going on?



Trend per stratum



- Urban
- Semi-natural grass
- Agriculture
- Woodland

March 2025

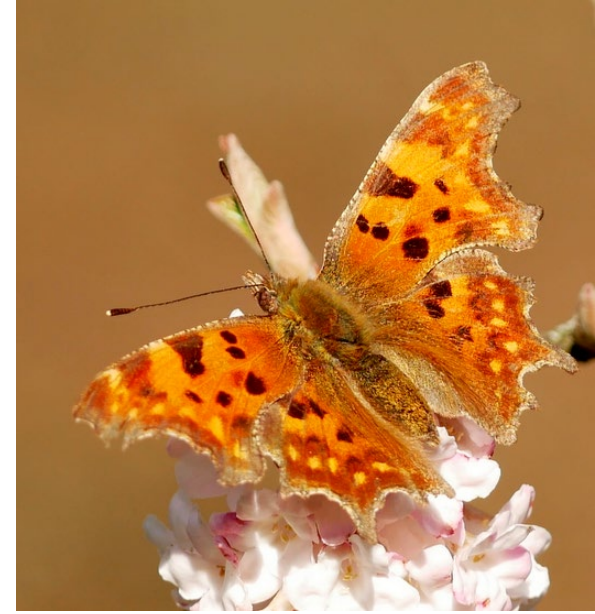
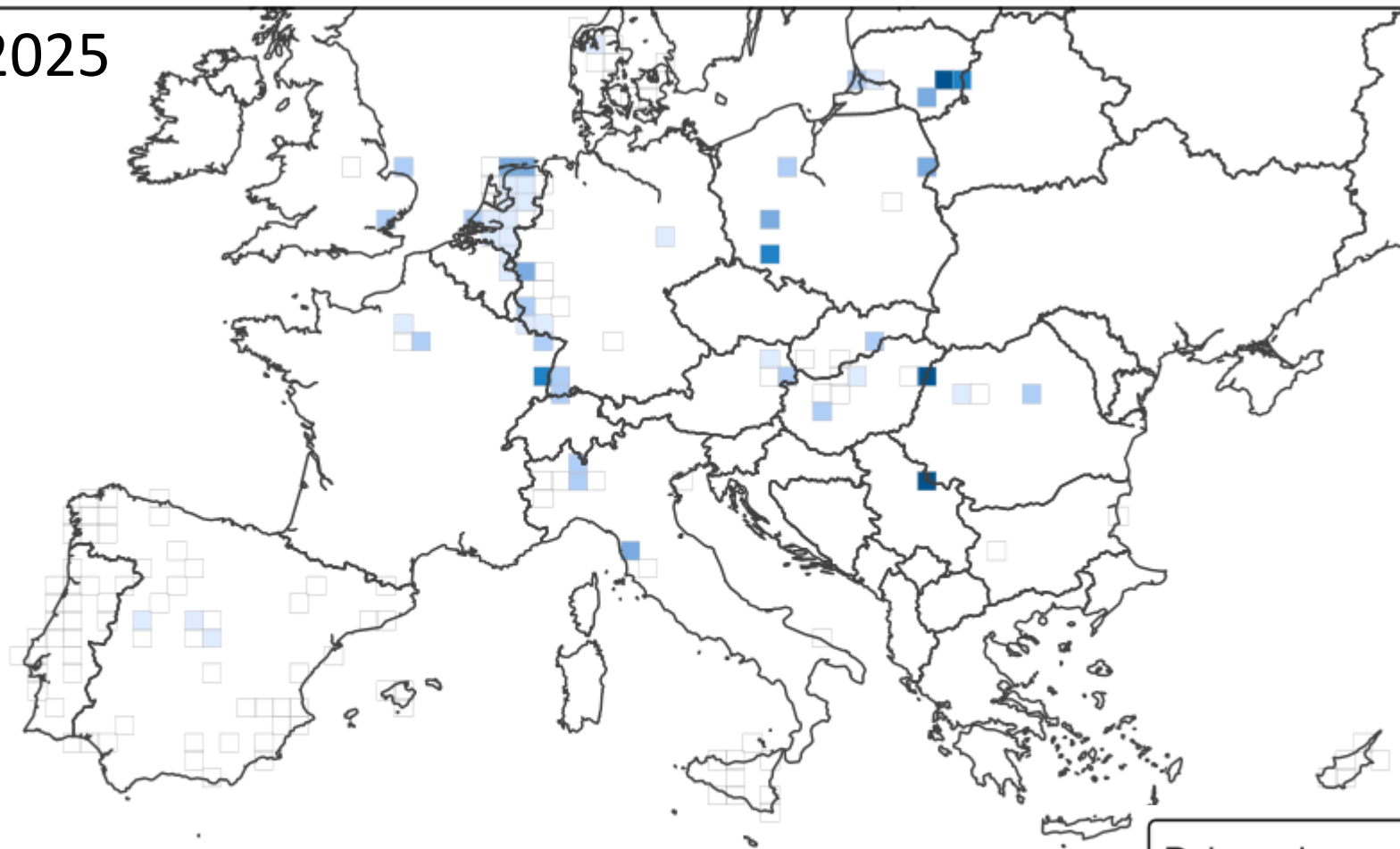


Lasiommata megera
2025-03-01 to 2025-03-31

- 0 to 2
- 2 to 4
- 4 to 7
- 7 to 14
- 14 to 22



March 2025



Polygonia c-album
2025-03-01 to 2025-03-31

- 0 to 1
- 1 to 2
- 2 to 3
- 3 to 4
- 4 to 6

March 2025



Vanessa cardui

2025-03-01 to 2025-03-31

- 0 to 1
- 1 to 2
- 2 to 4
- 4 to 5
- 5 to 9

What have we gained?

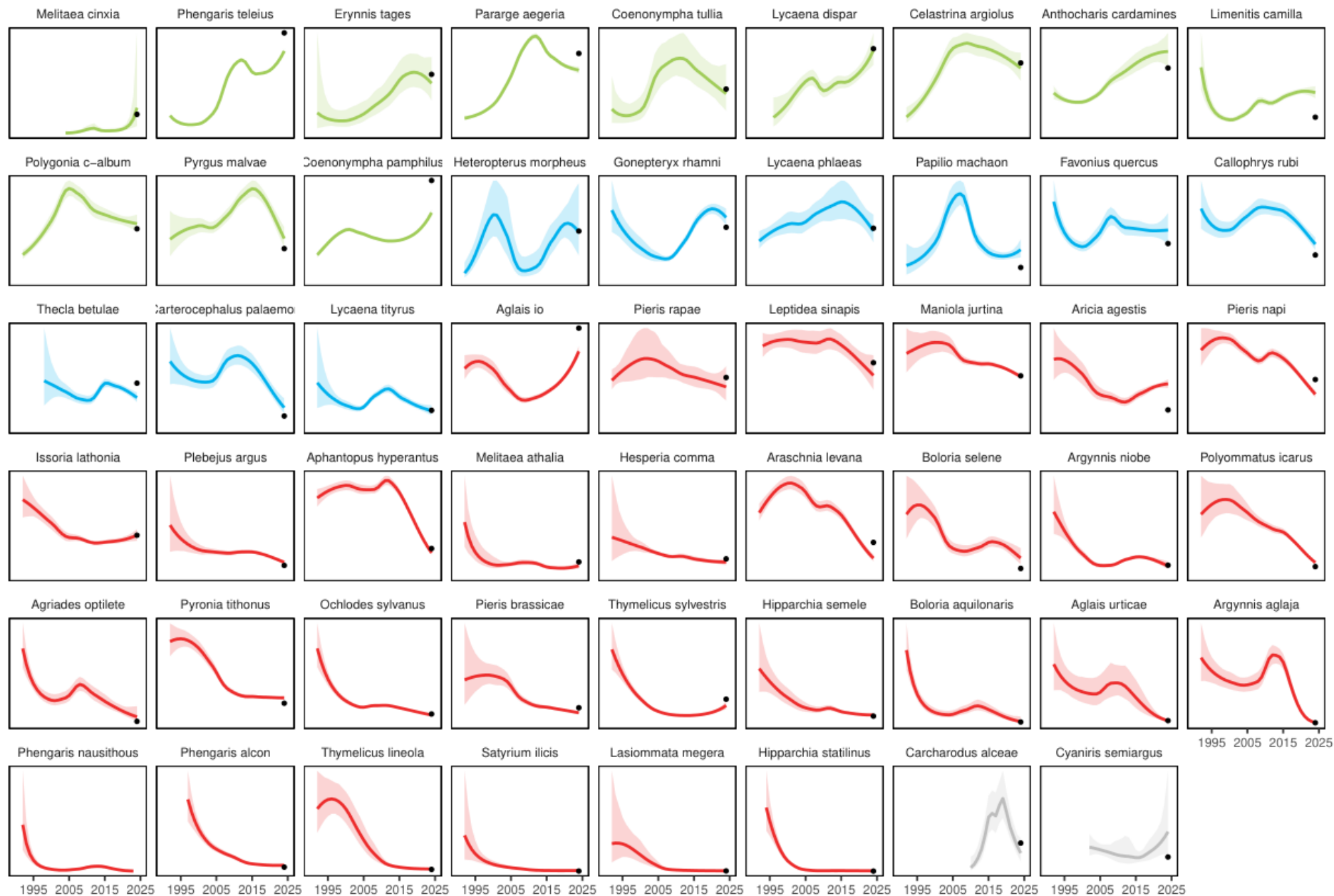


- Species trends
- Species abundance
- Indicators

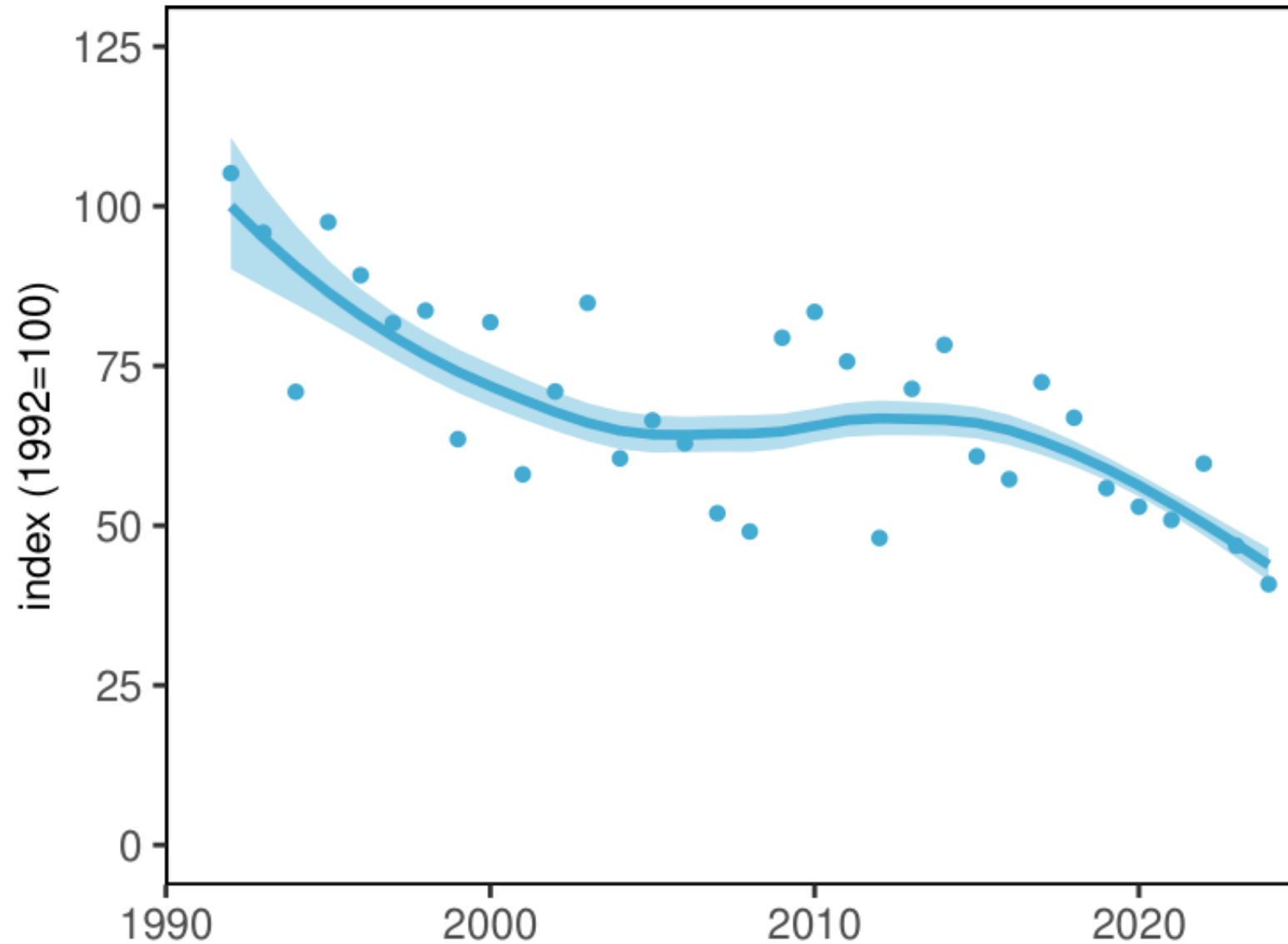
Making indicators

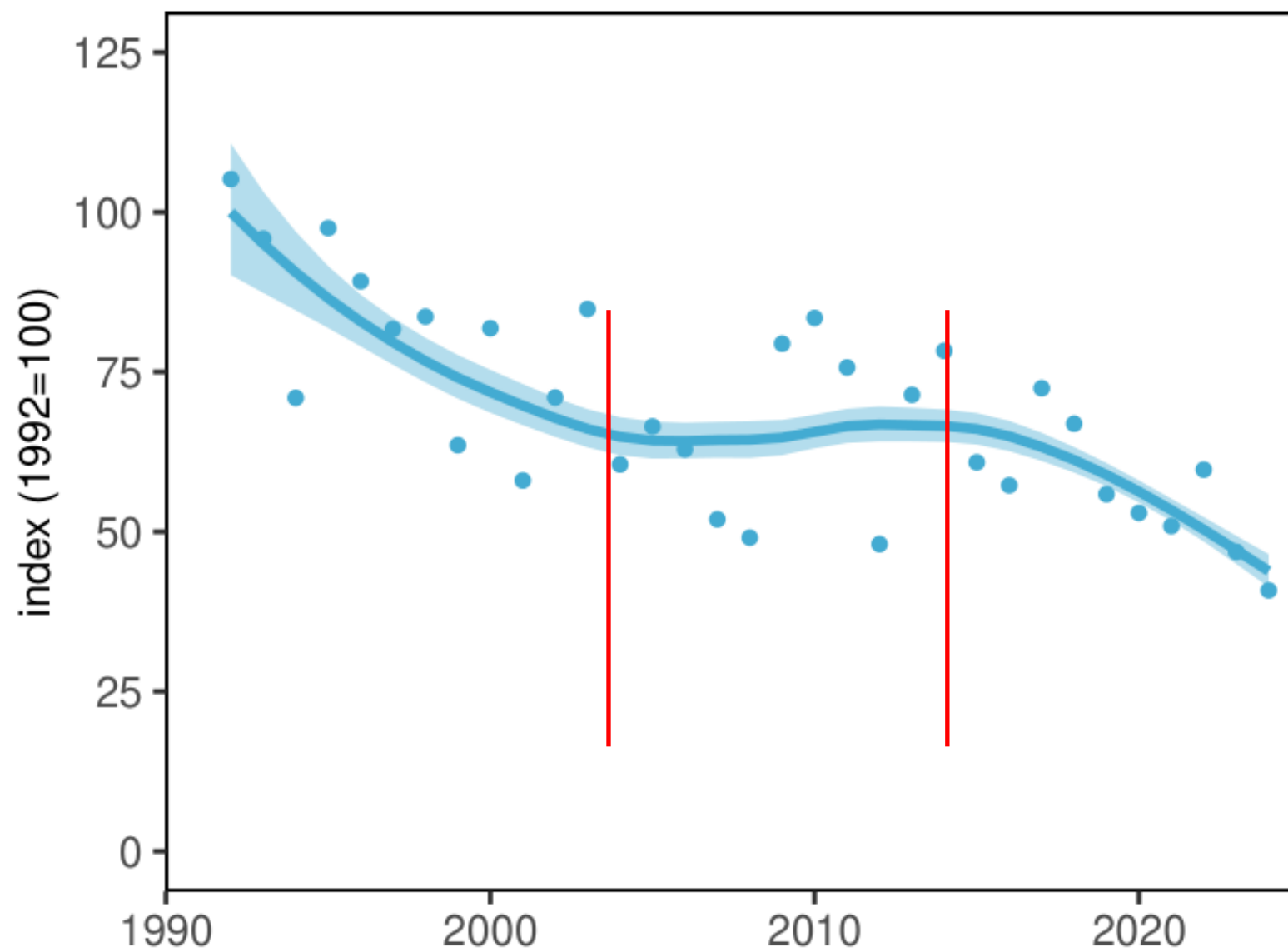


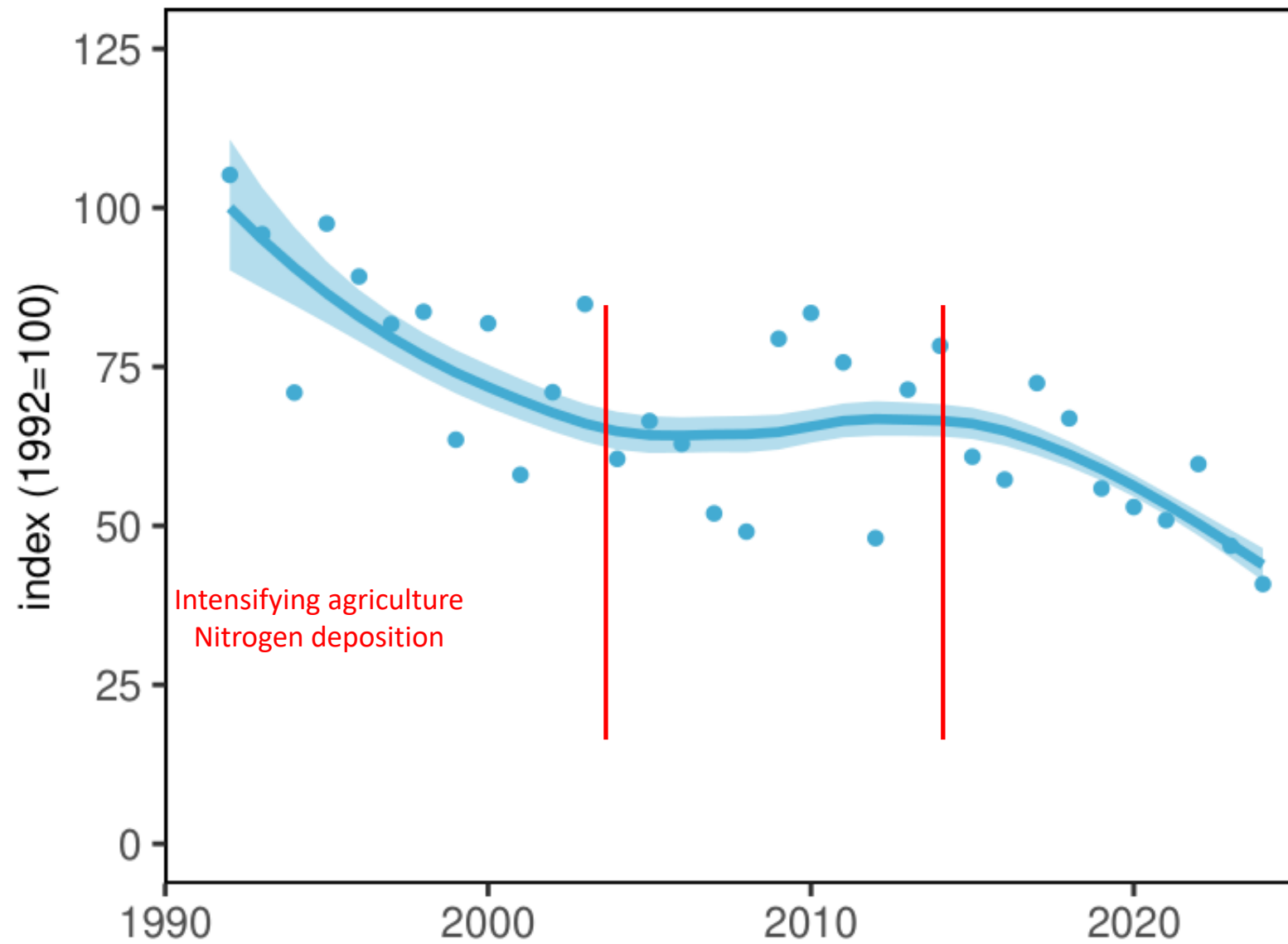
- Make one graph to combine them all
- Comparable with DAX/Dow Jones (well known to politicians)
- Combine speciestrends to indicator

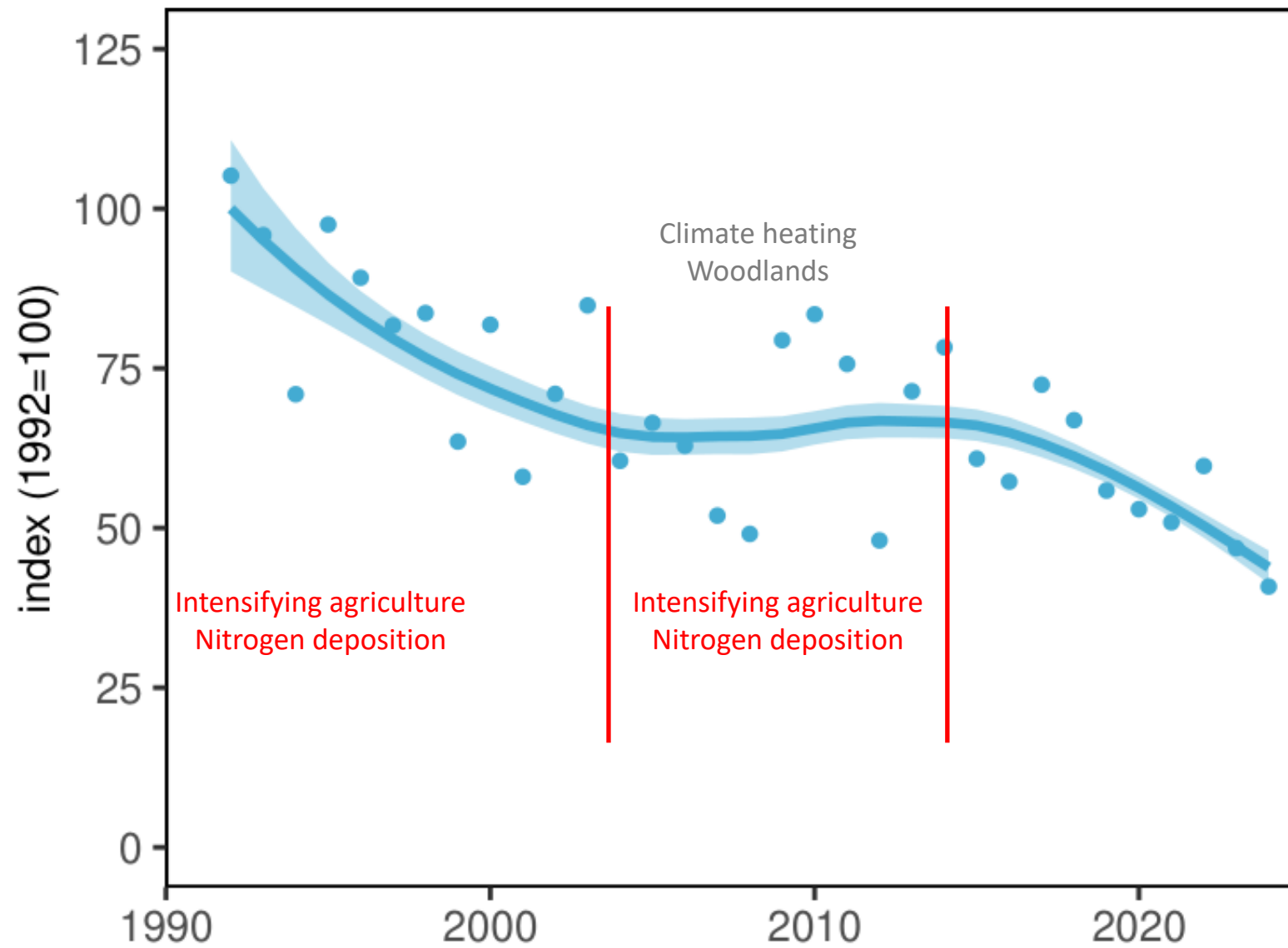


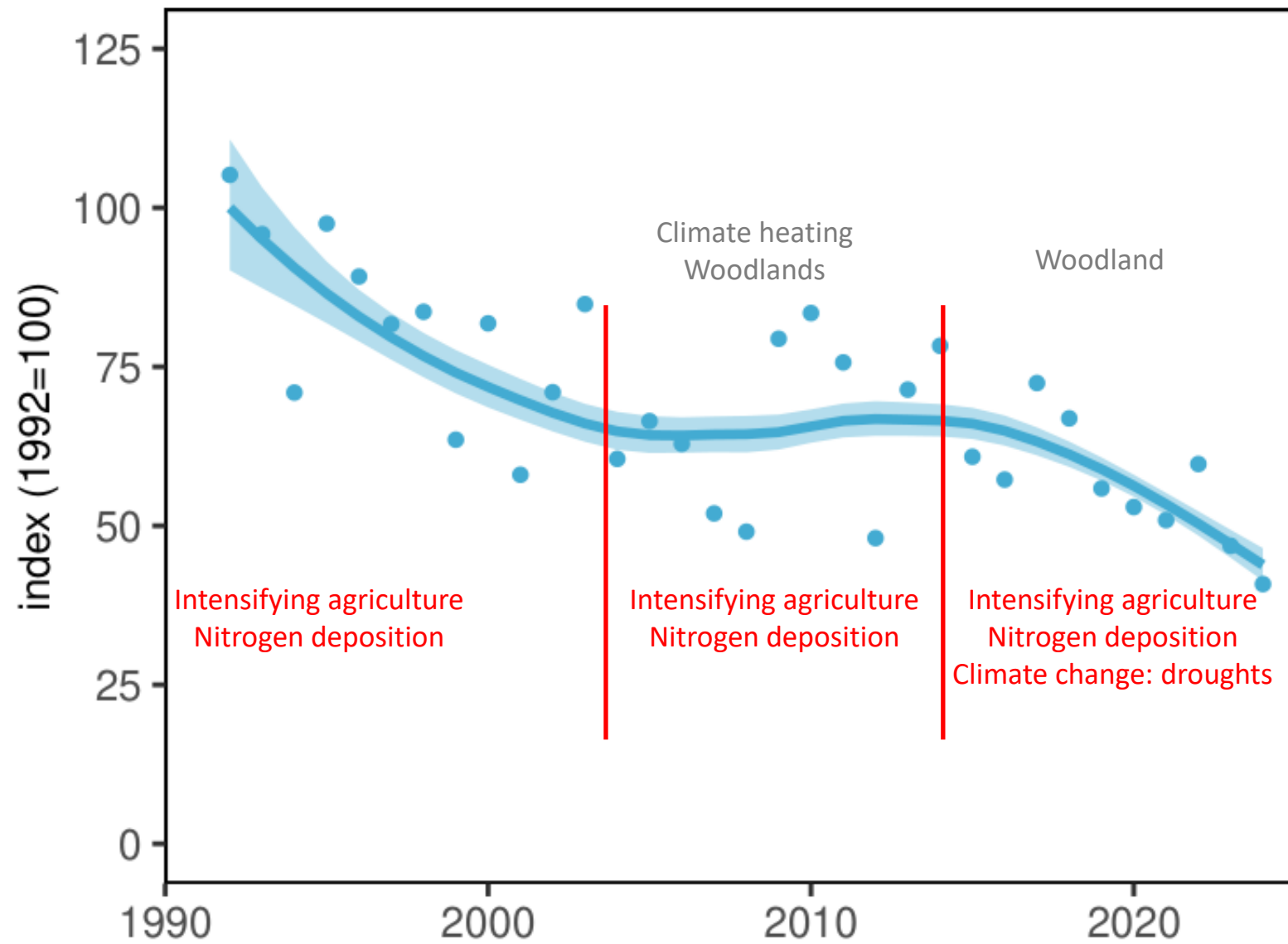
Indicator for all butterflies in Netherlands



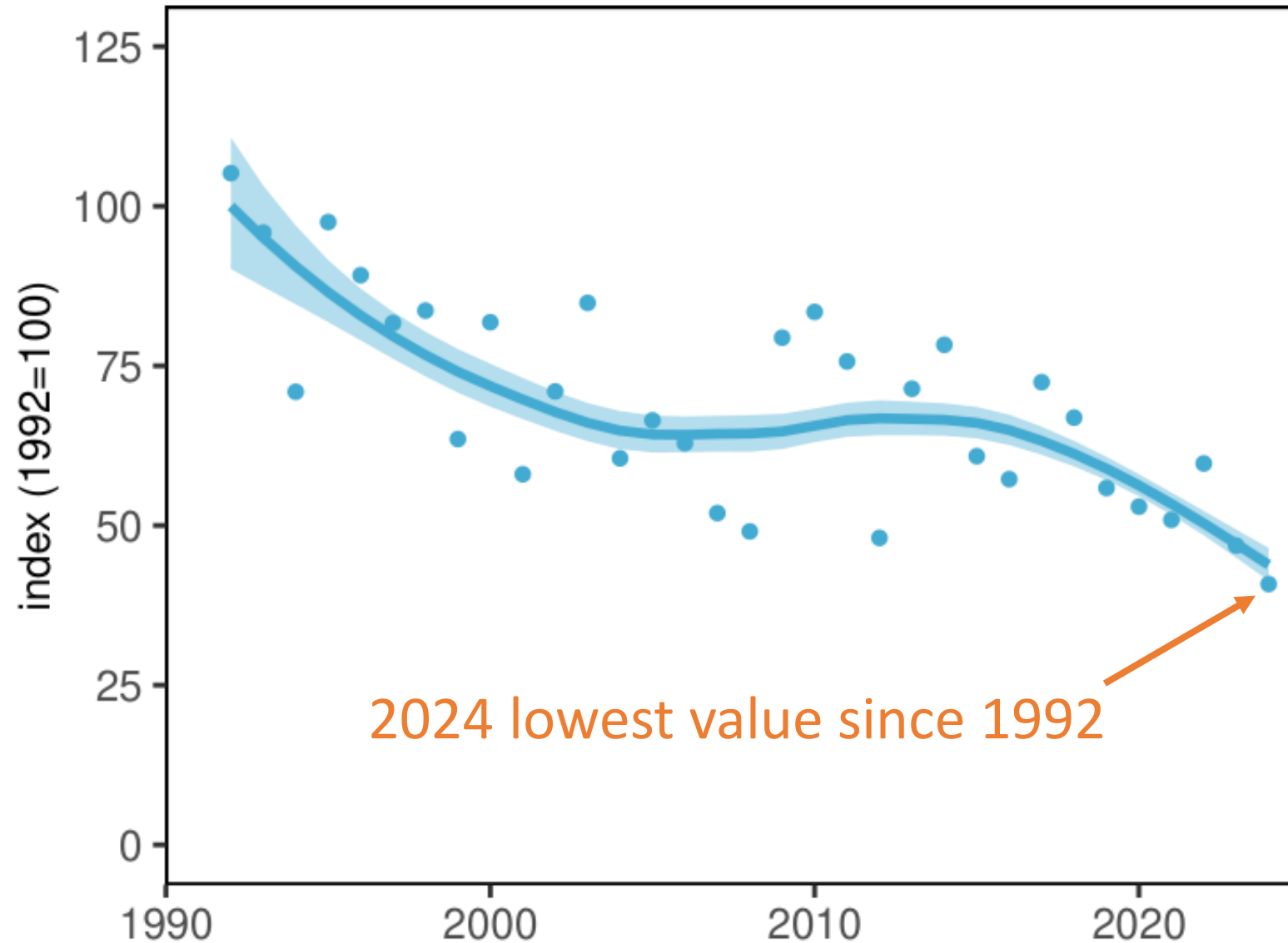


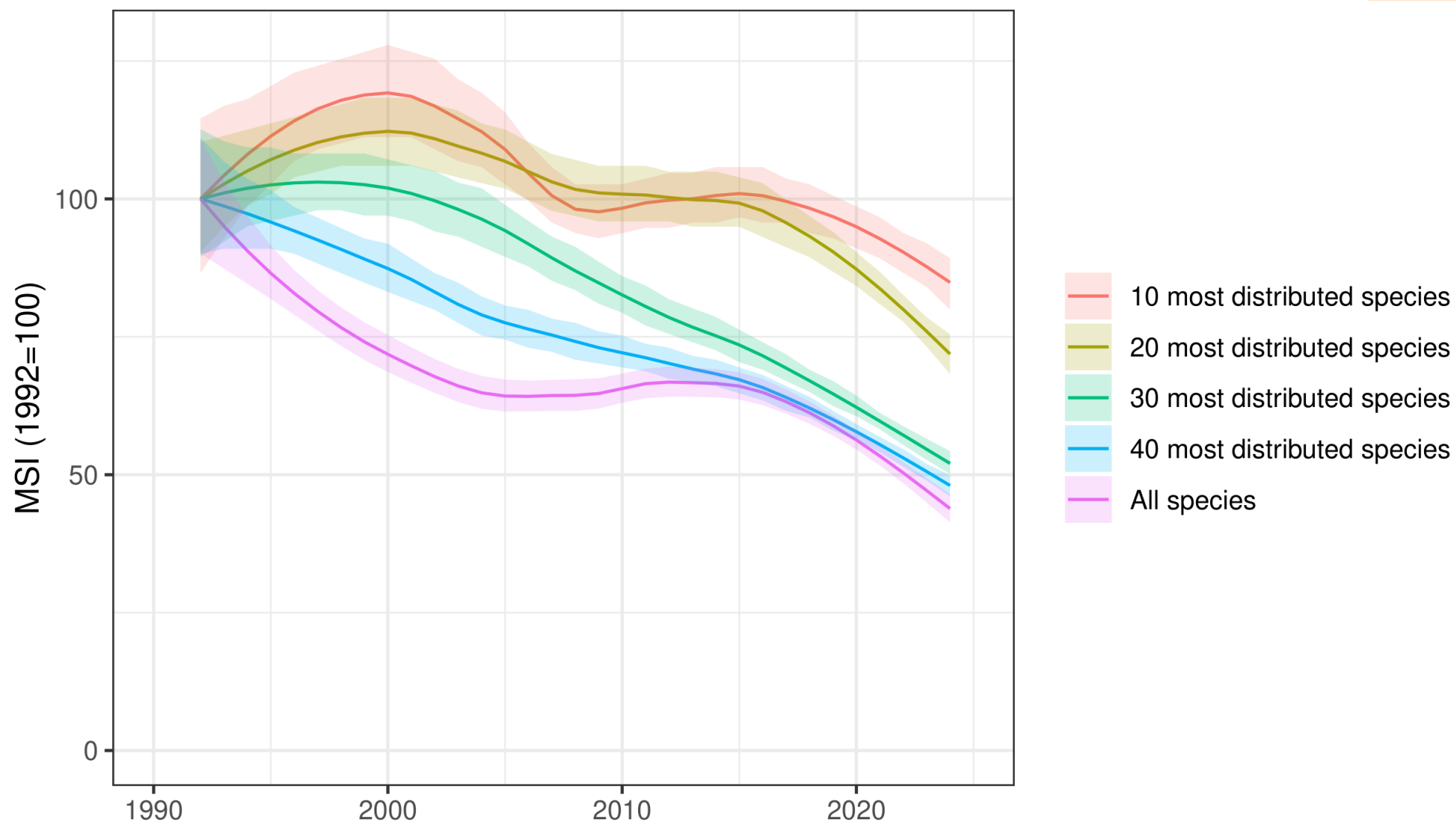




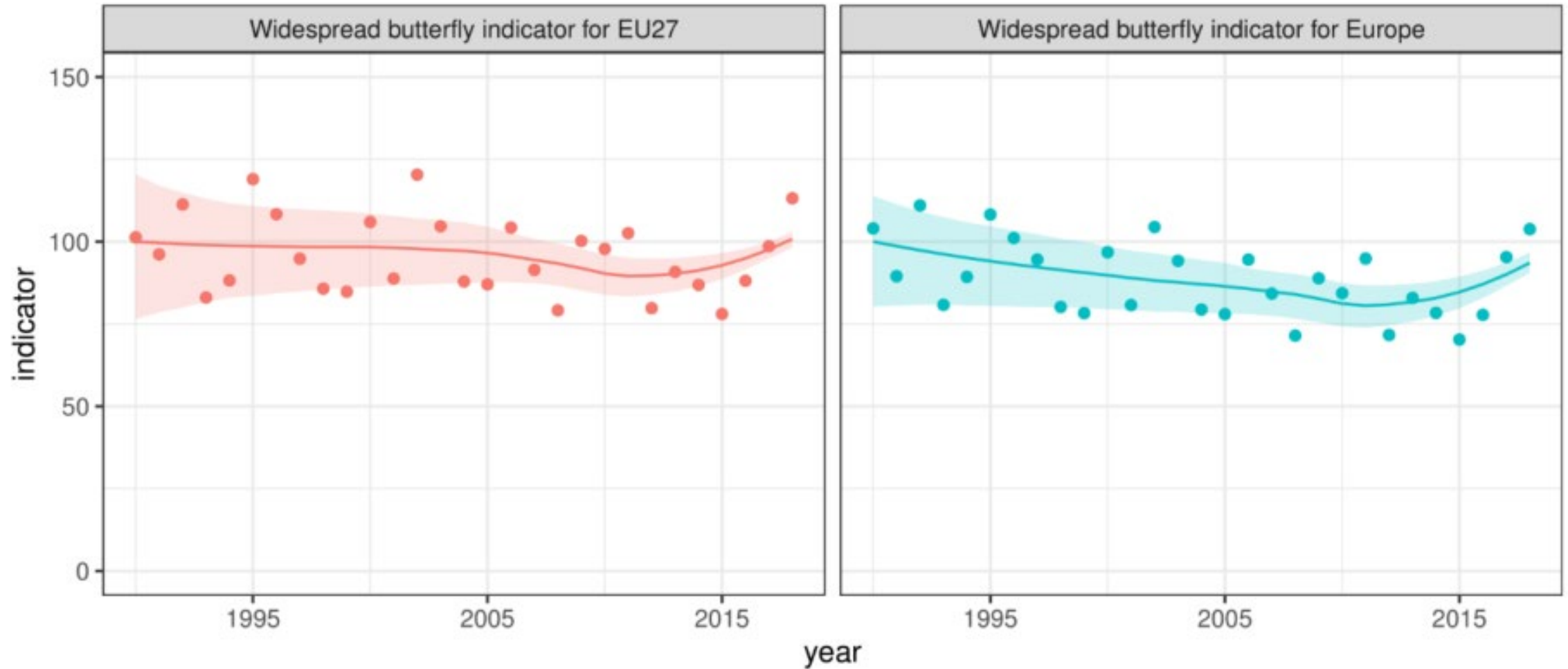


Indicator for all butterflies in Netherlands

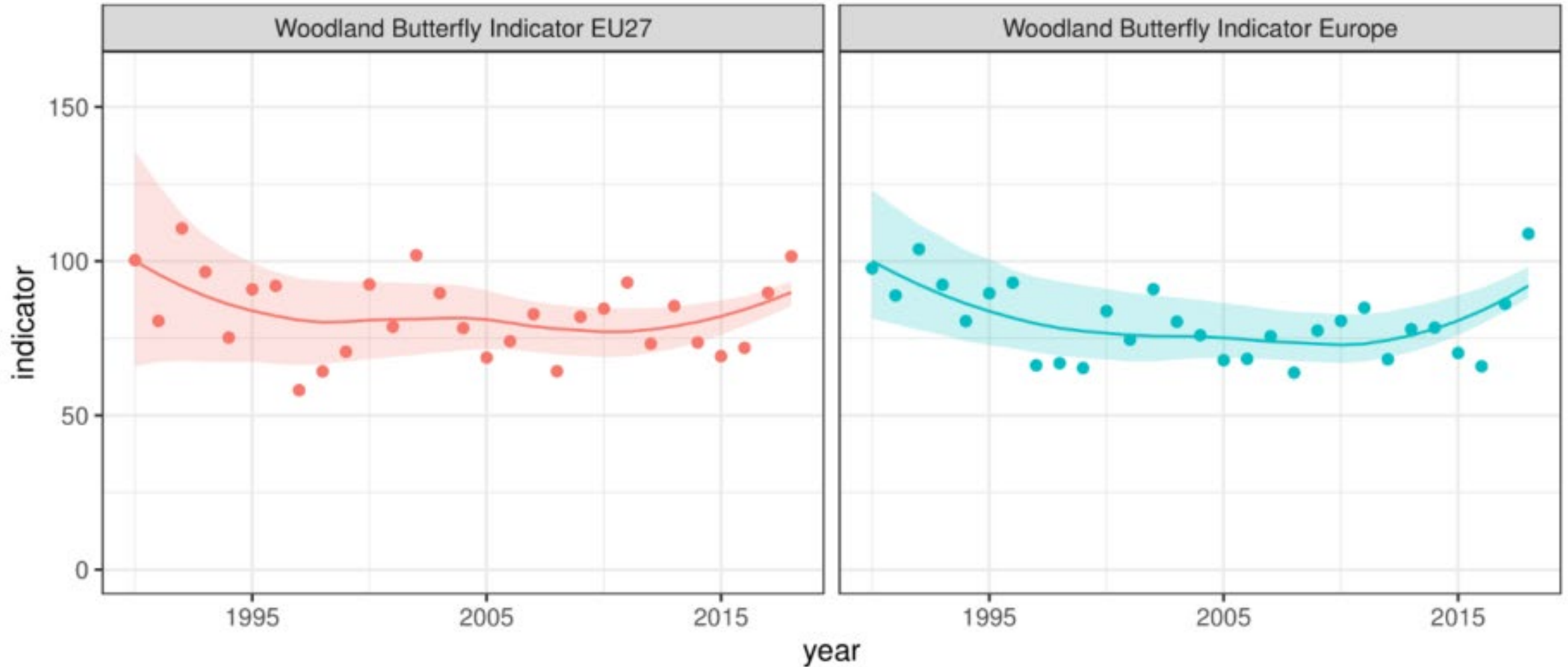




Widespread butterfly indicator



Woodland butterfly indicator



What have we gained?



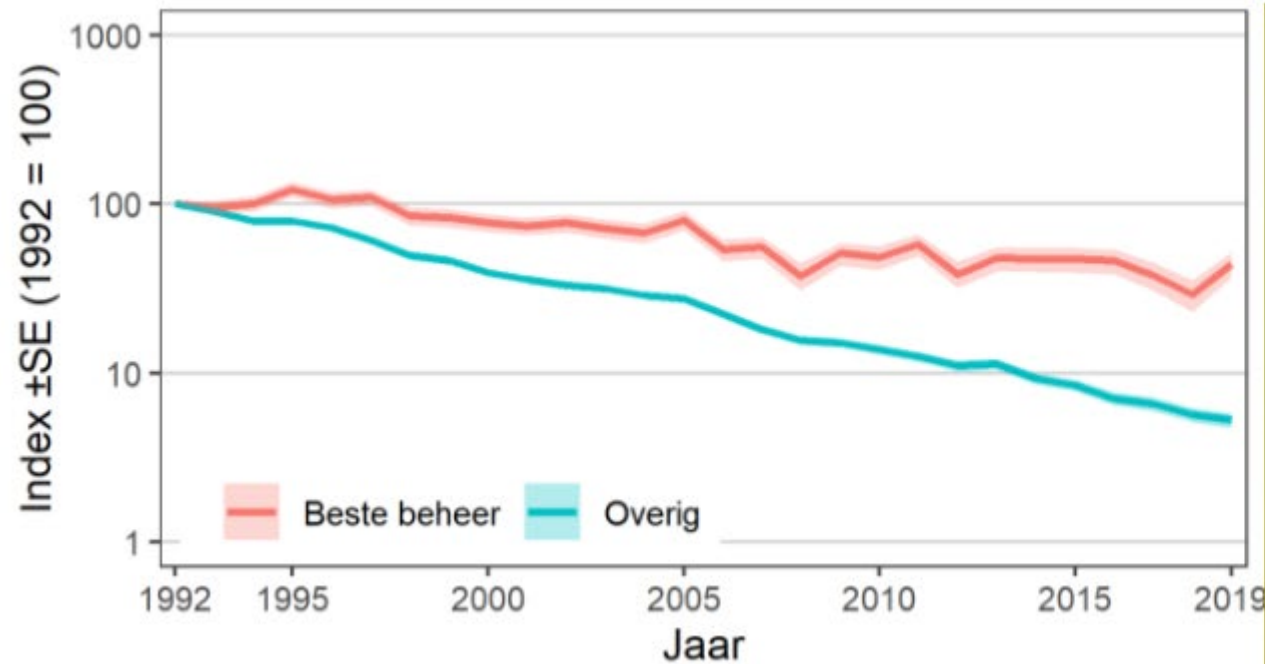
- Species trends
- Species abundance
- Indicators
- Scientific papers

What have we gained?

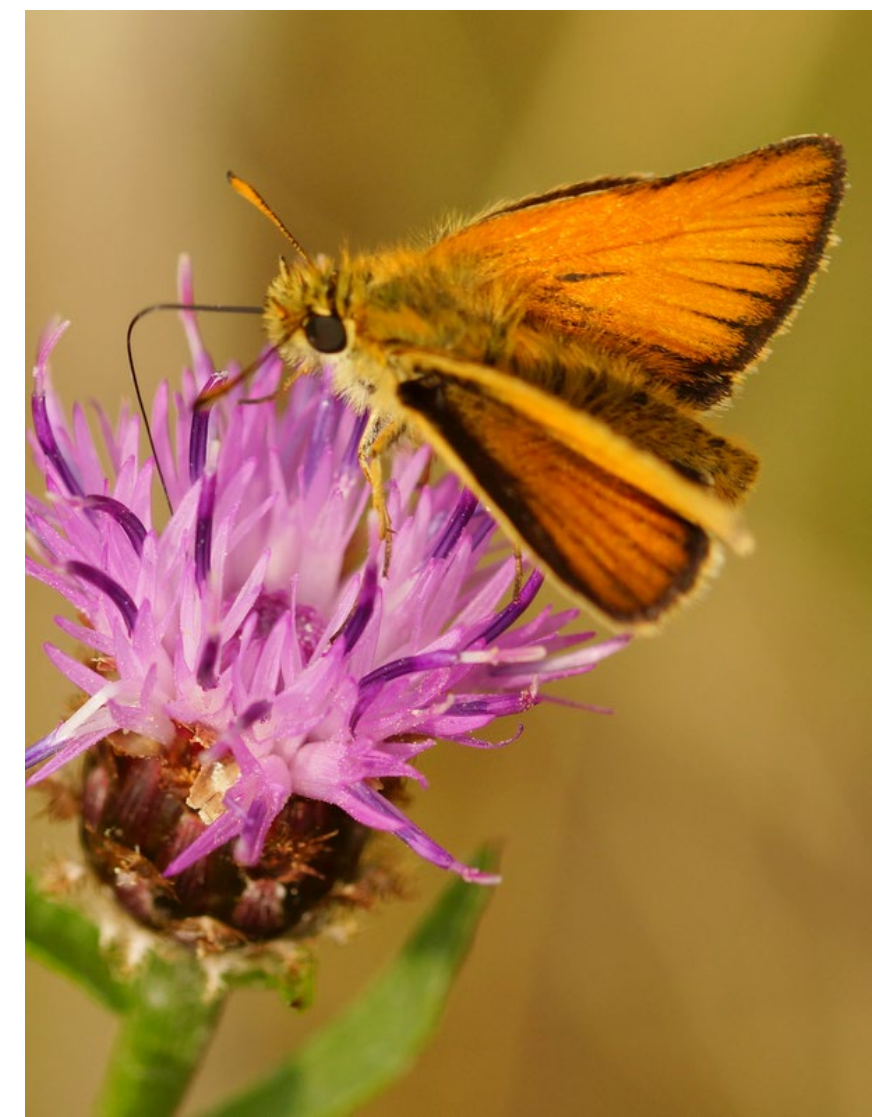
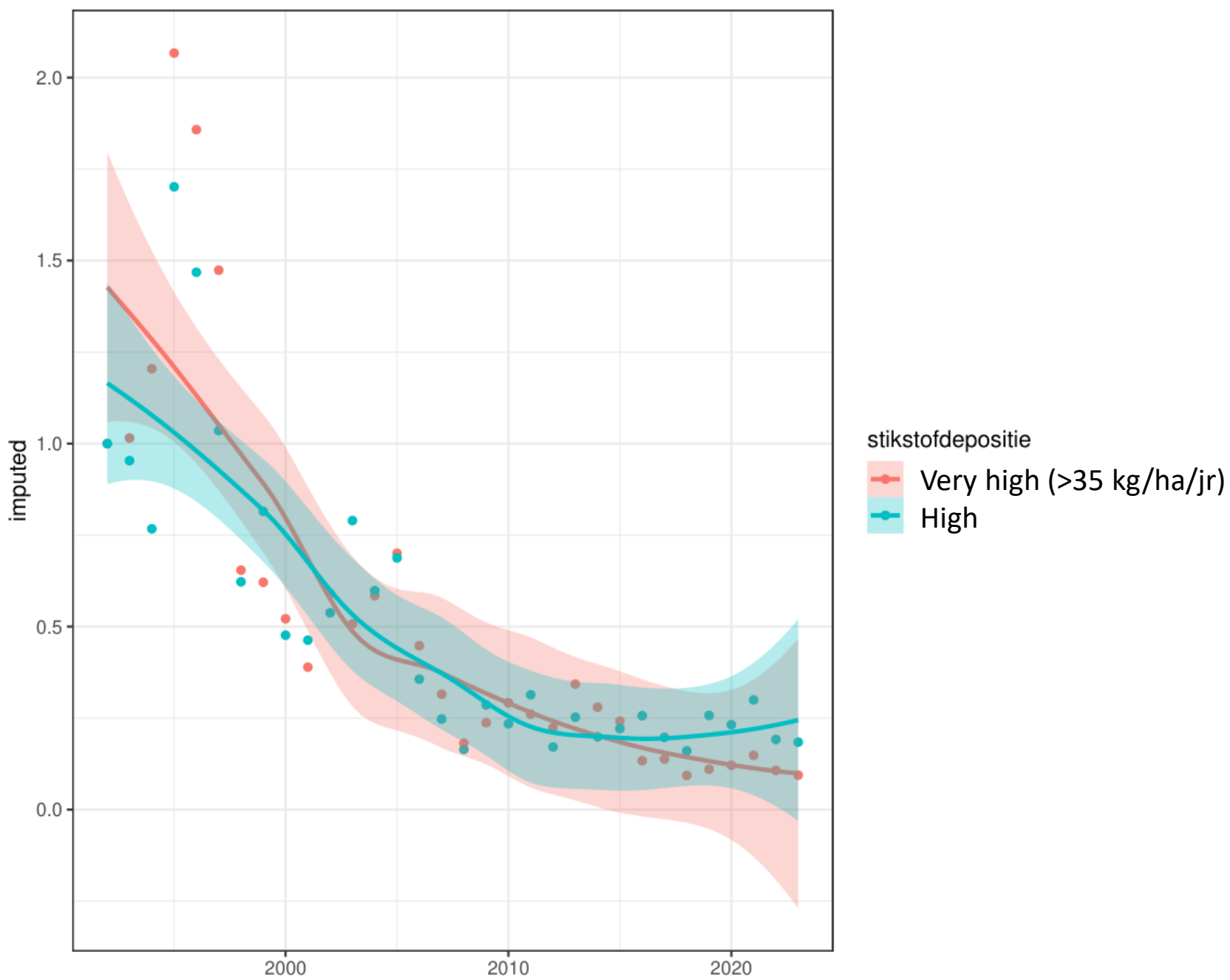


- Species trends
- Species abundance
- Indicators
- Scientific papers
- **Conservation**

Best management



Zoë Delamore



What have we gained?



- Species trends
- Species abundance
- Indicators
- Scientific papers
- Conservation
- **Public awareness**

News

Opinion

Sport

Culture

Lifestyle



The Guardian

Eur ▾

Environment Climate crisis **Wildlife** Energy Pollution

Environment

This article is more than 2 years old

Number of butterflies in UK falls to lowest since surveys began

Prevalence of plastic grass and rising levels of nitrates blamed for absence of many species in urban gardens



While the gatekeeper butterfly recorded an increase of over 50% this summer, many other species declined on the levels recorded last year, according to Butterfly Conservation's annual Big Butterfly Count. Photograph: Liam Richardson/Butterfly Conservation/PA

Patrick Barkham

Fri 7 Oct 2022 08:00 CEST

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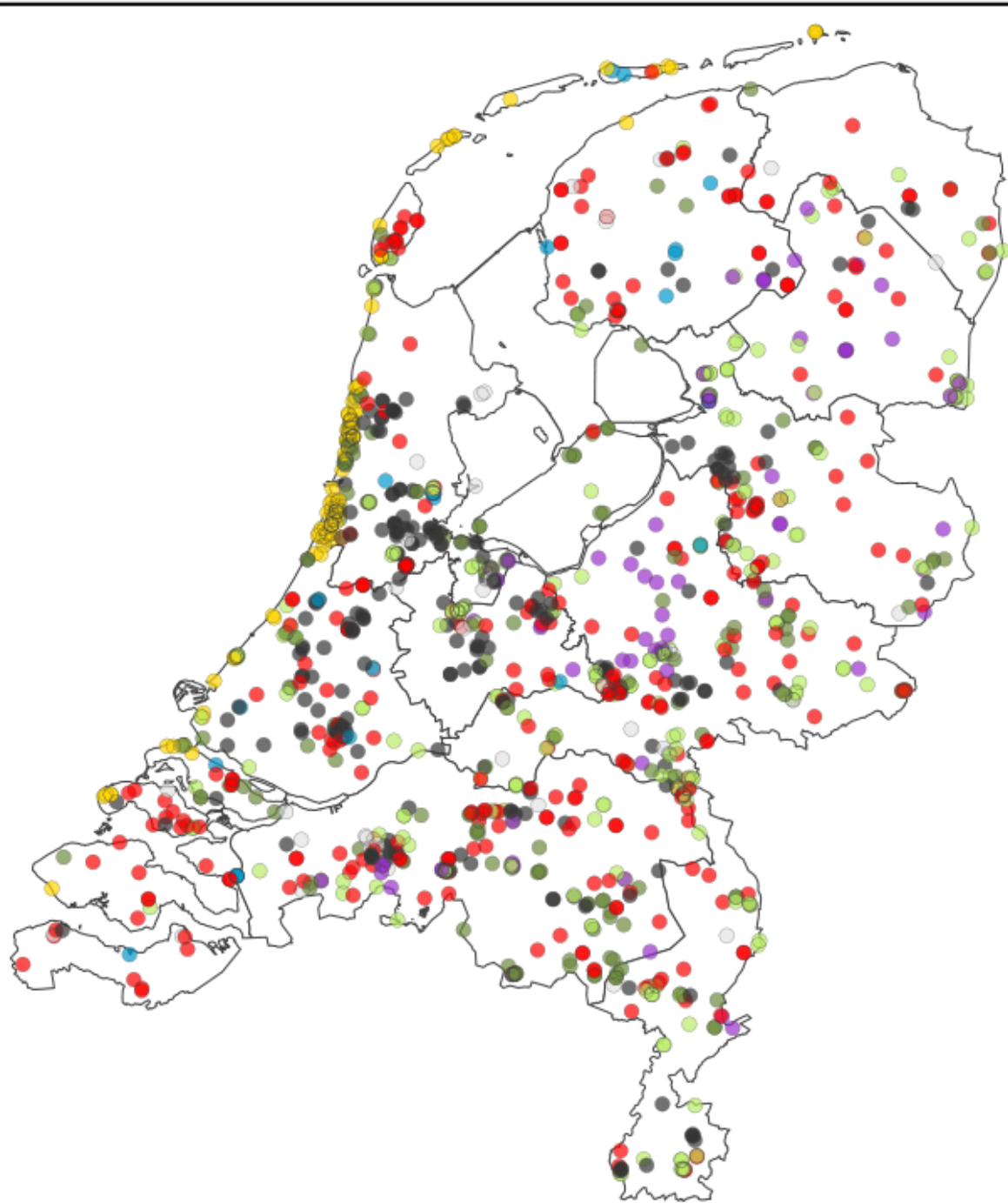
What have we gained?



- Species trends
- Species abundance
- Indicators
- Scientific papers
- Conservation
- Public awareness
- **Recorders in every community and village**

Begroeiing 2024

- Agrarisch
- Anders
- Bos
- Duin
- Half natuurlijk grasland
- Heide
- Moeras
- Stedelijk



Butterfly Monitoring used 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)
 - Phenology for Pollinator monitoring (EUPOMS)?
 - National restoration plans





Chris van Swaay

chris.vanswaay@vlinderstichting.nl

De Vlinderstichting

Mennonietenweg 10

Postbus 506

6700 AM Wageningen

info@vlinderstichting.nl

www.vlinderstichting.nl