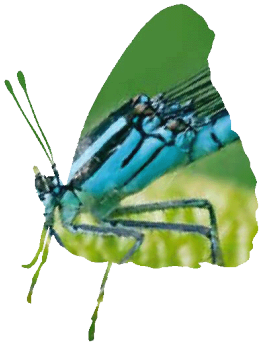
Trends in biodiversiteit in Europa

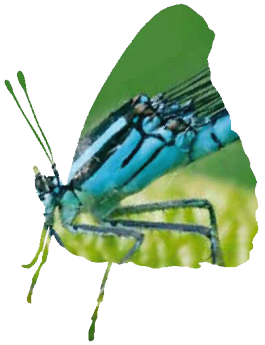
Chris van Swaay
De Vlinderstichting
Butterfly Conservation Europe

De Vlinderstichting



Trends in biodiversiteit: indicatoren

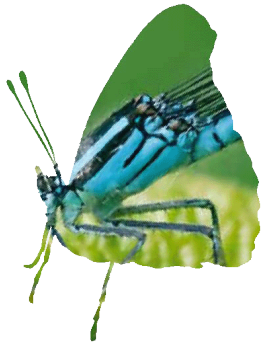
- Biodiversiteit: van telling naar indicator
  - Protocol
  - Opportunistische waarnemingen
- Trend in biodiversiteit
- Artikel 17 rapportage



De Vlinderstichting

Wat laat een indicator zien?

De Vlinderstichting

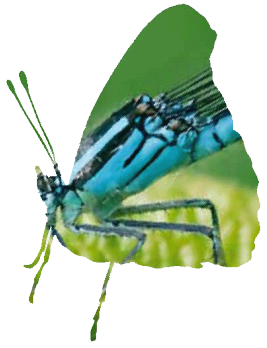


Wat laat een indicator zien?

GERELATEERDE AANDELEN AEX

Instrument	Koers	Verschil | %	Hoog	Laag	Volume | Gem.
AEX	598,19 12-nov-19 14:00:15	+1,80 +0,30%	599,05	597,26	
AALBERTS NV	39,410 13:59:00	-0,260 -0,66%	39,800	39,370	112.568 Gem. 355,8K -68%
ABN AMRO BANK N.V.	17,525 13:59:30	+0,215 +1,24%	17,570	17,370	1.143.823 Gem. 2,7M -57%
ADYEN NV	637,000 14:00:06	-5,000 -0,78%	645,400	635,400	17.057 Gem. 68,4K -75%
Aegon	4,269 14:00:11	+0,070 +1,67%	4,275	4,203	2.605.715 Gem. 10,9M -76%
Ahold Delhaize	24,315 14:00:20	-0,095 -0,39%	24,465	24,285	853.561 Gem. 4,1M -79%
Akzo Nobel	87,040 14:00:22	+0,870 +1,01%	87,070	86,130	189.064 Gem. 747K -75%
ArcelorMittal	15,654 14:00:15	+0,140 +0,90%	15,828	15,556	3.742.554 Gem. 10,2M -63%
ASML	242,700 14:00:24	+0,850 +0,35%	243,800	242,000	224.973 Gem. 933,9K -76%
ASR Nederland	34,780 13:53:20	+0,090 +0,26%	34,950	34,650	70.729 Gem. 427,4K -83%
DSM	116,450 13:59:58	-0,200 -0,17%	117,500	116,250	129.623 Gem. 824K -84%

De Vlinderstichting



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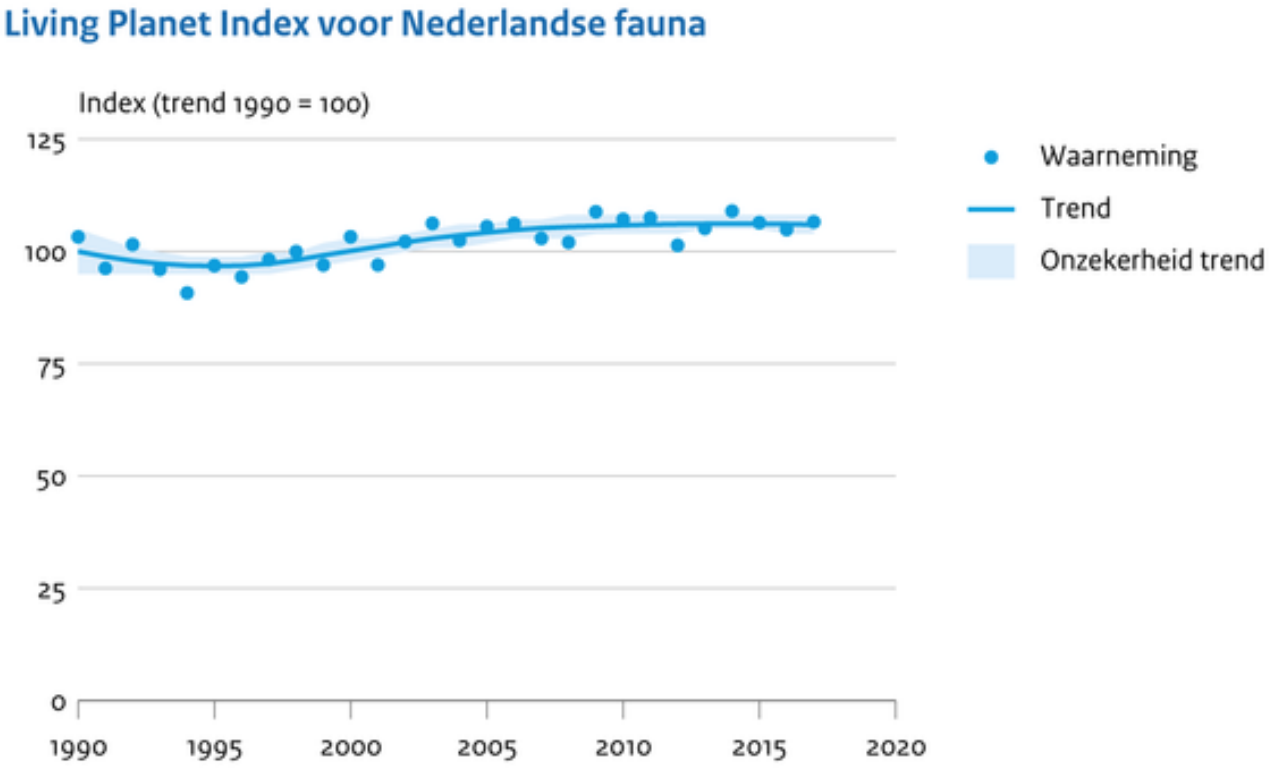
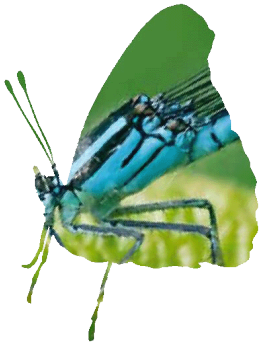


Bron: NEM (Soortenorganisaties, CBS)

CBS/apr19
www.clo.nl/nl156904



De Vlinderstichting

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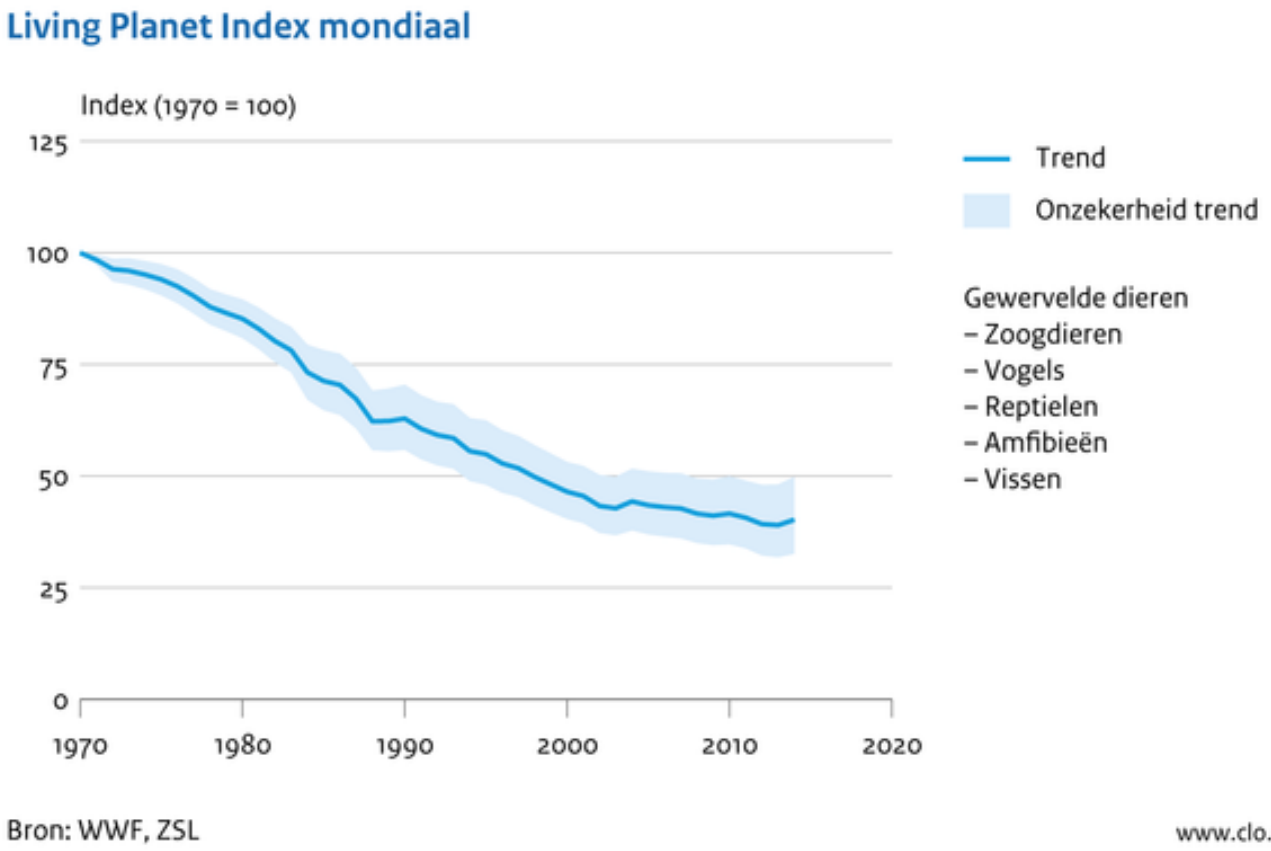
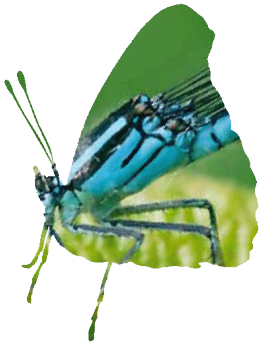


Bron: WWF, ZSL

CBS/apr19
www.clo.nl/nl156904



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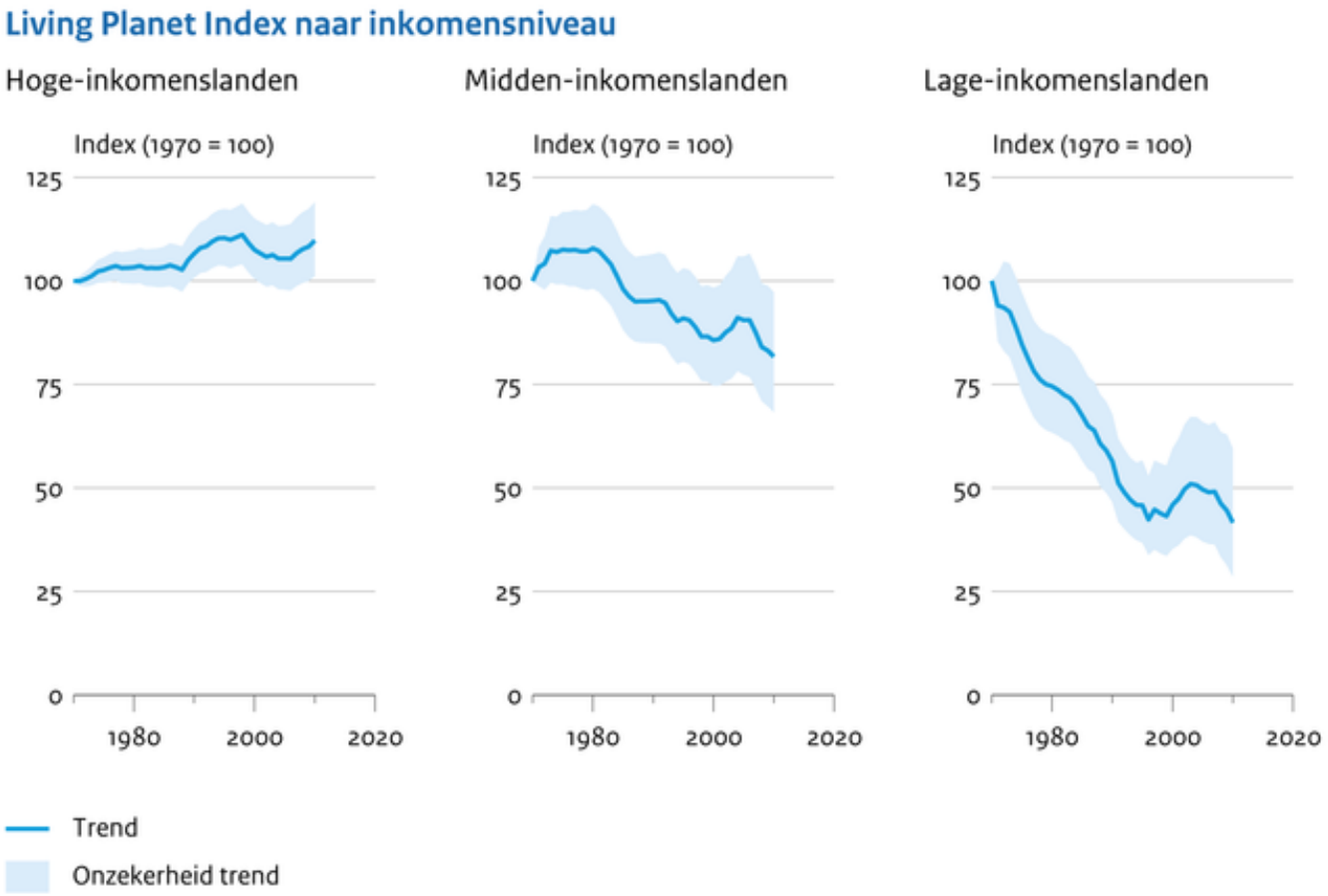
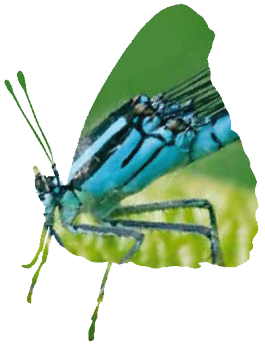
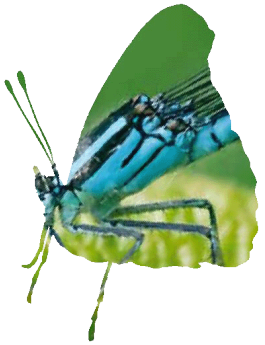




De Vlinderstichting

Tellingen volgens protocol

- Je weet zeker waar en hoe geteld is
- Je kunt nullen onderscheiden van ‘missing values’
- Kan zowel professioneel als via citizen science
- In NW Europe vaak met ‘expert volunteers’
- Bekende voorbeelden zijn broedvogelmonitoring (sovon) en het meetnet vlinders (Vlinderstichting)



De Vlinderstichting

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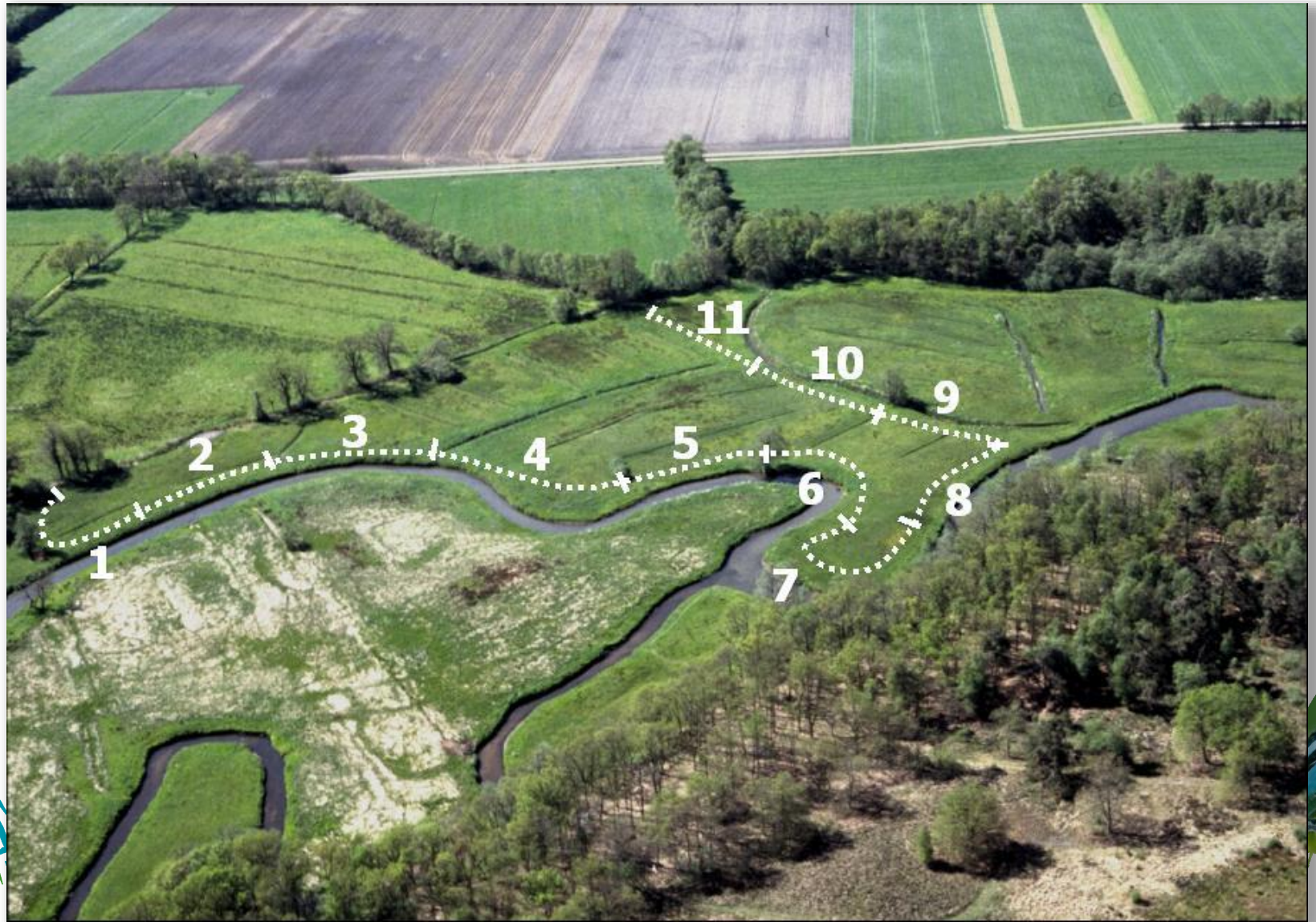
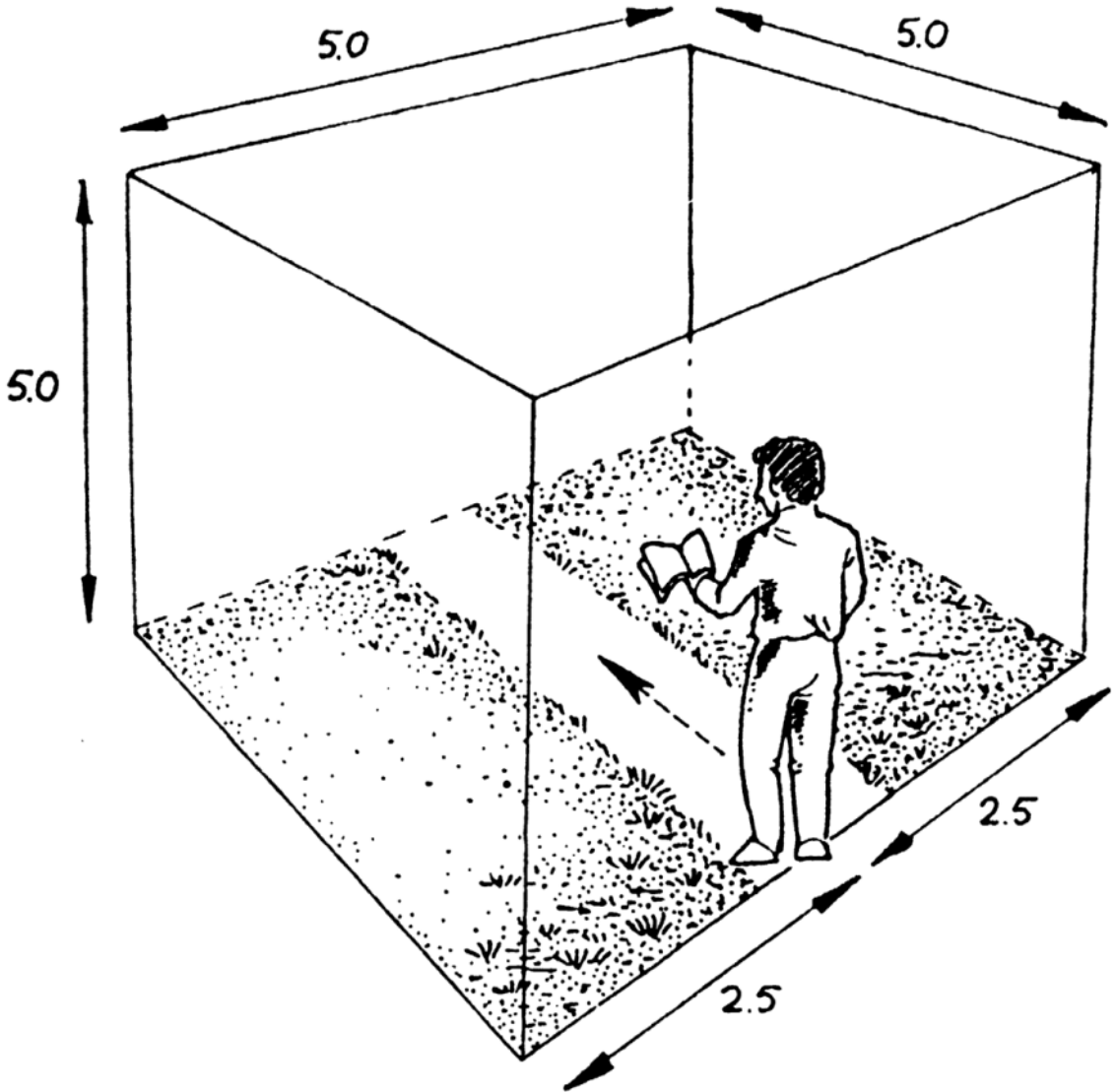
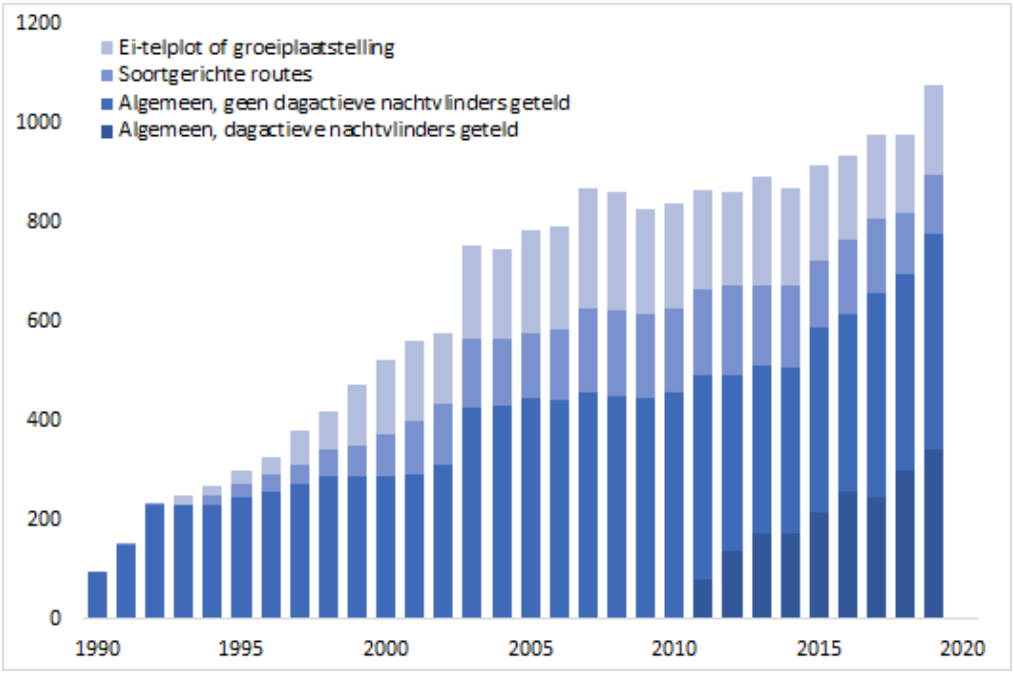
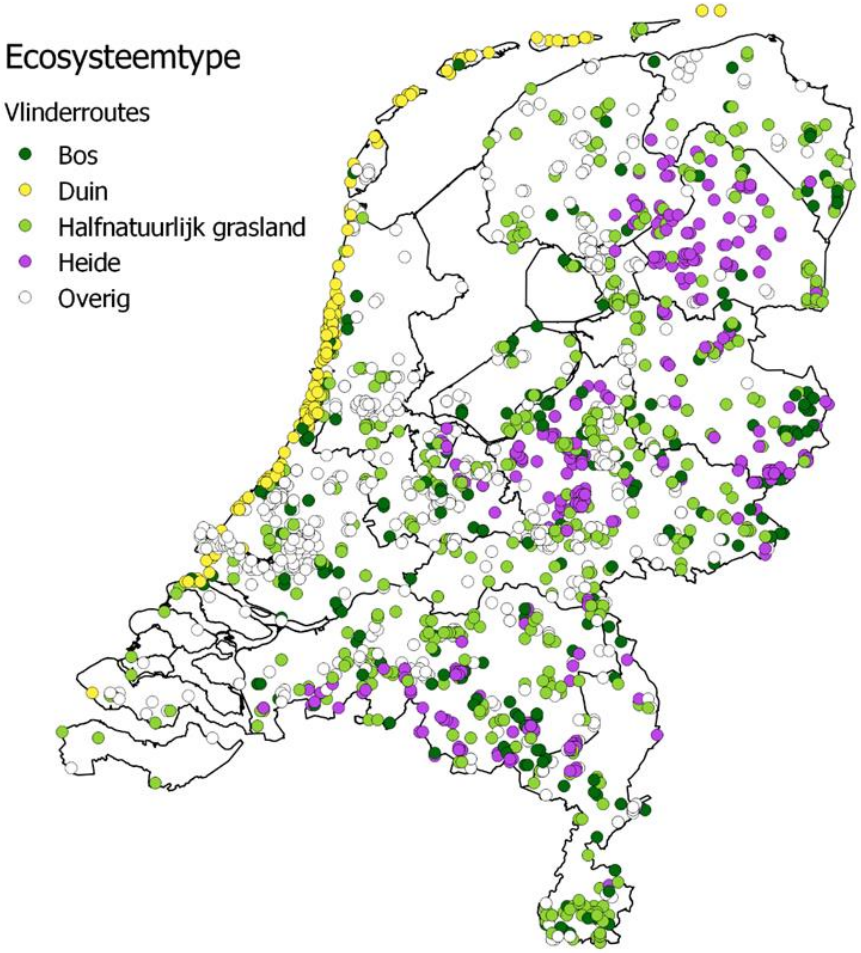




De Vlinderstichting

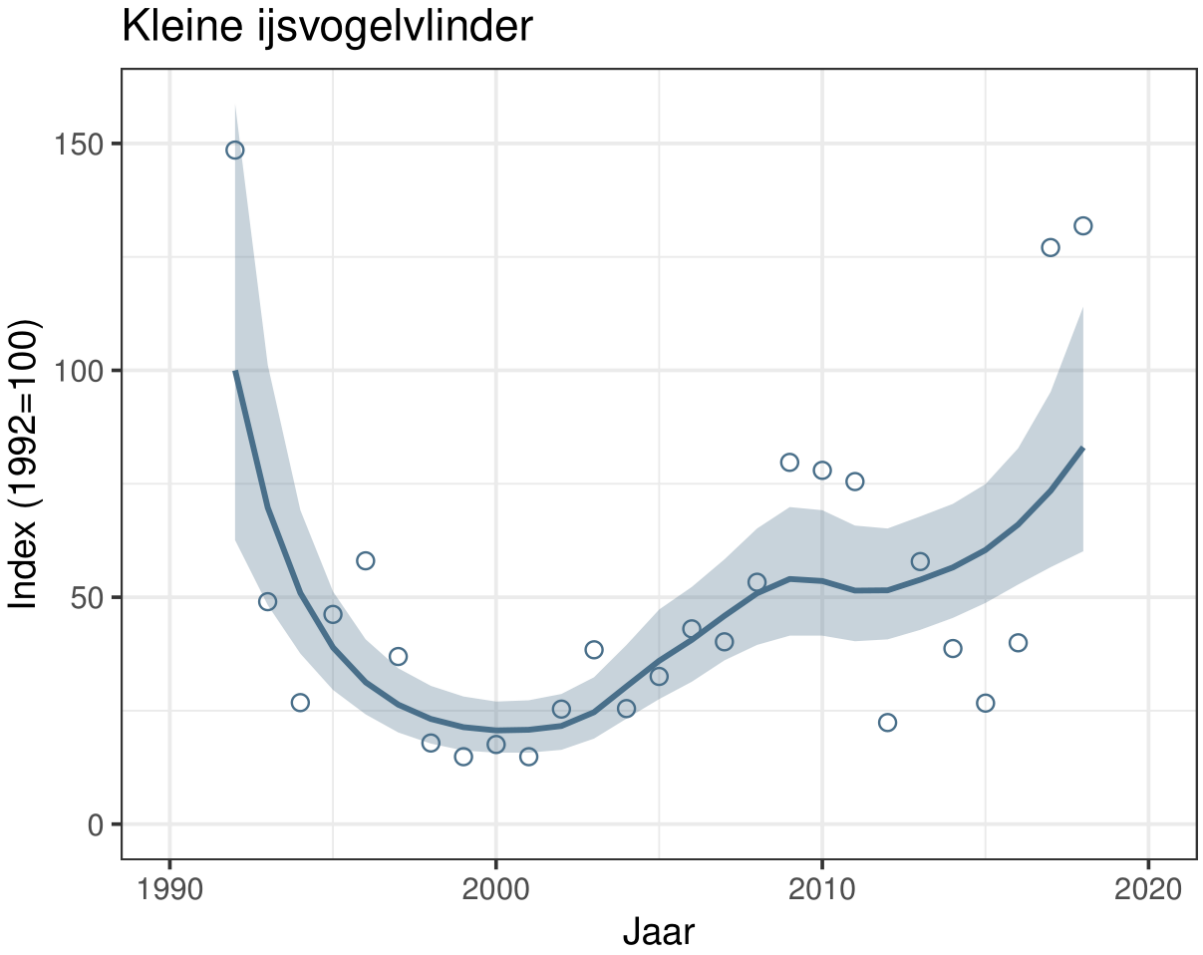
Tellingen volgens protocol

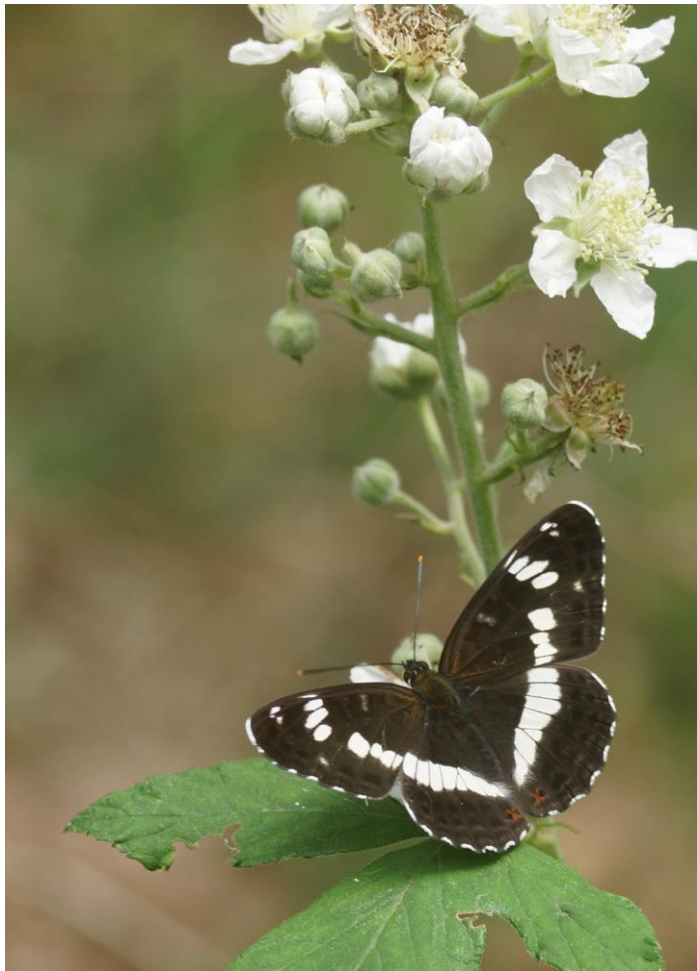




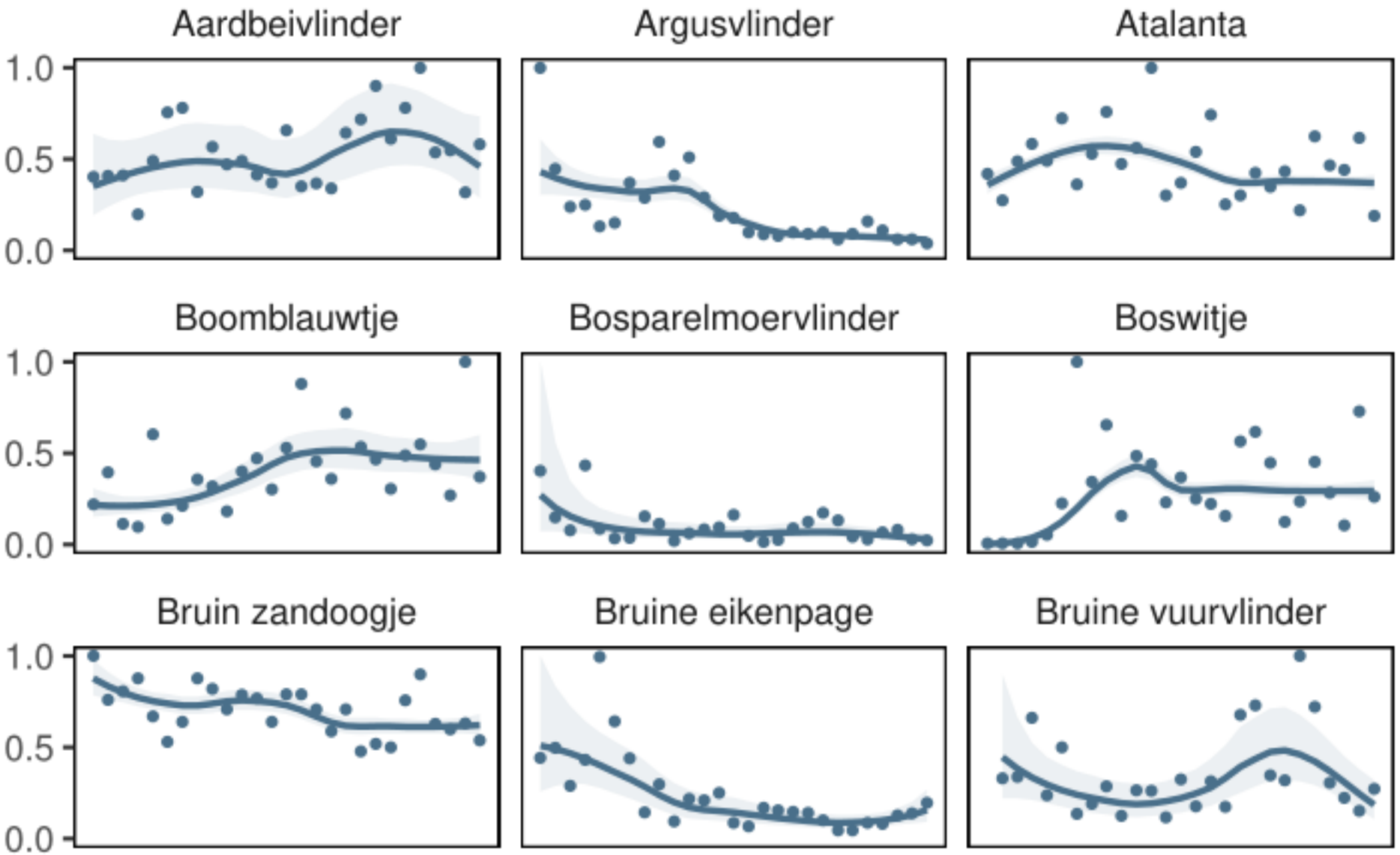
De Vlinderstichting

Aantalstrends



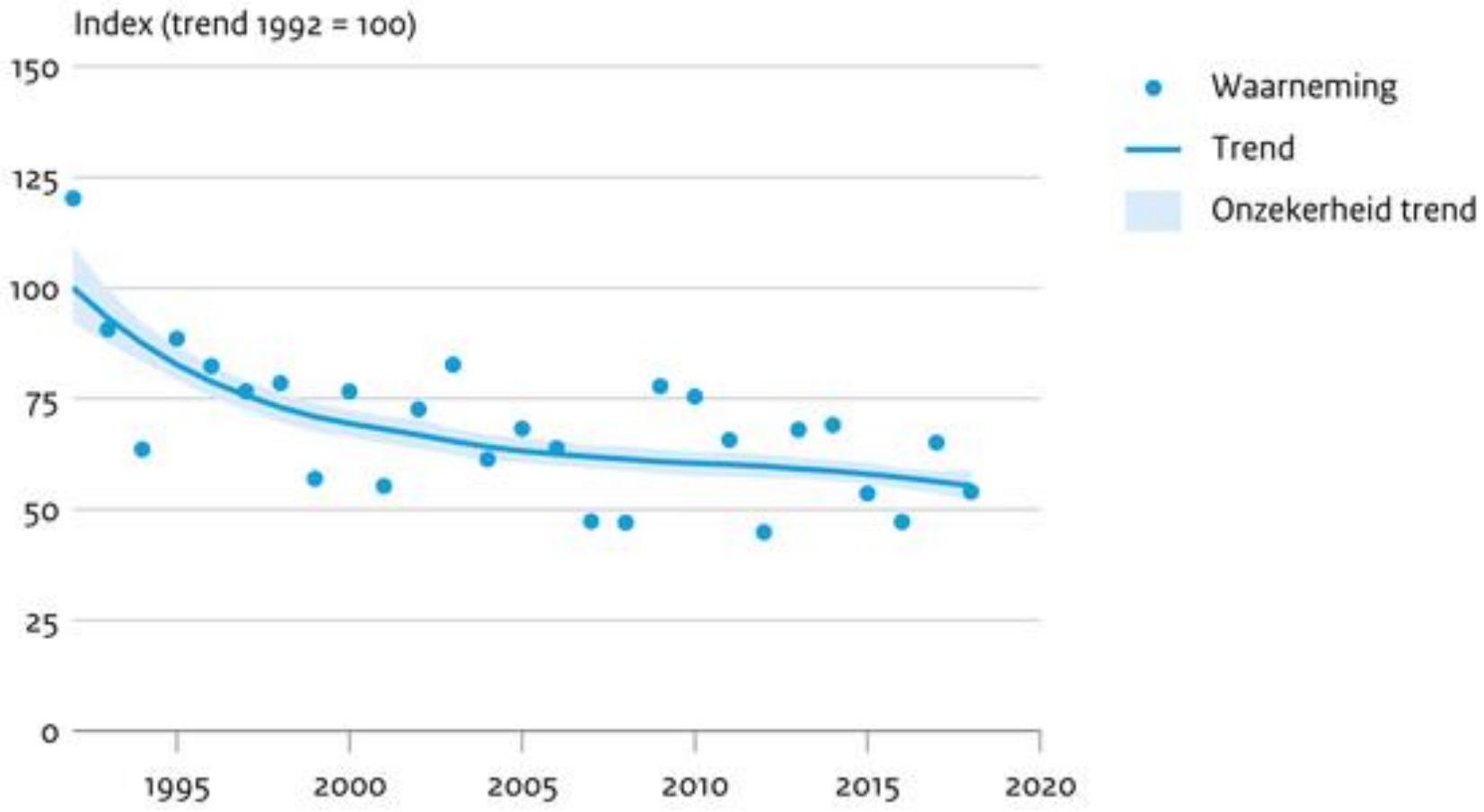


Nederlandse aantalstrends



Soortgroepindicator

Aantalstrend dagvlinders

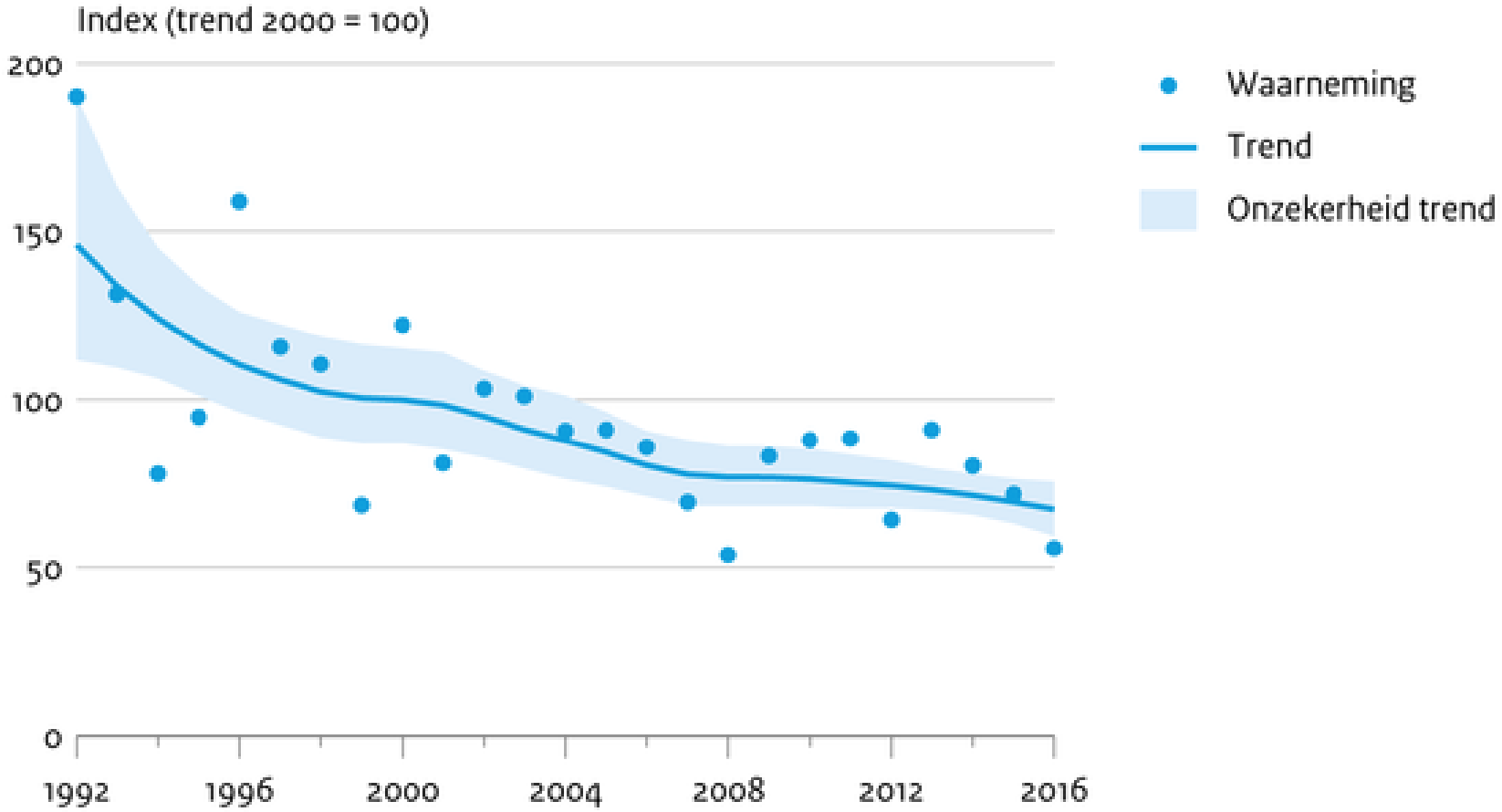


Bron: NEM (Vlinderstichting, CBS)

CBS/mrt19
www.clo.nl/nl138616

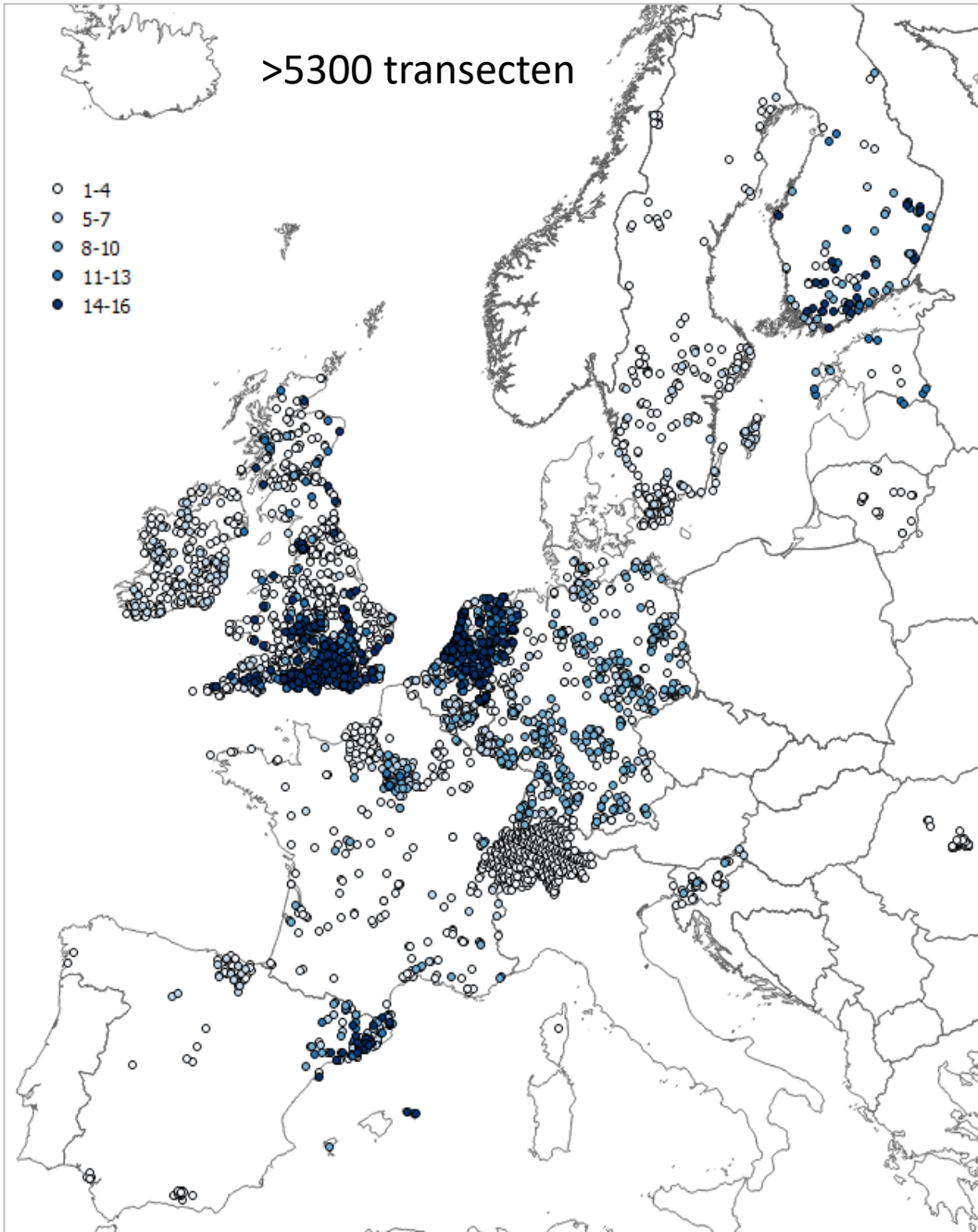
Habitatsoortgroepindicator

Dagvlinders in grasland



Bron: NEM (Vlinderstichting, CBS)

CBS/feb18
www.clo.nl/nl118114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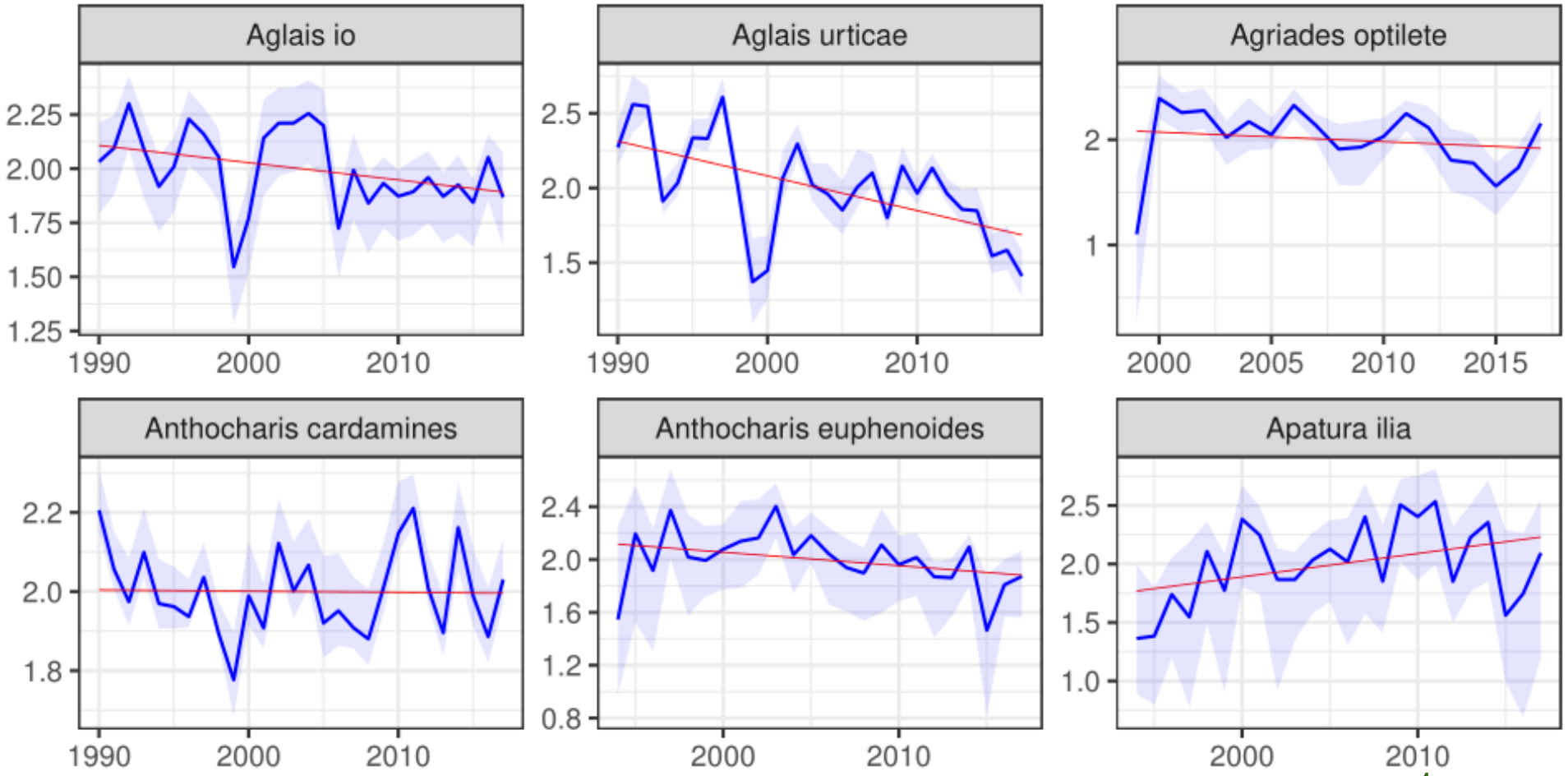
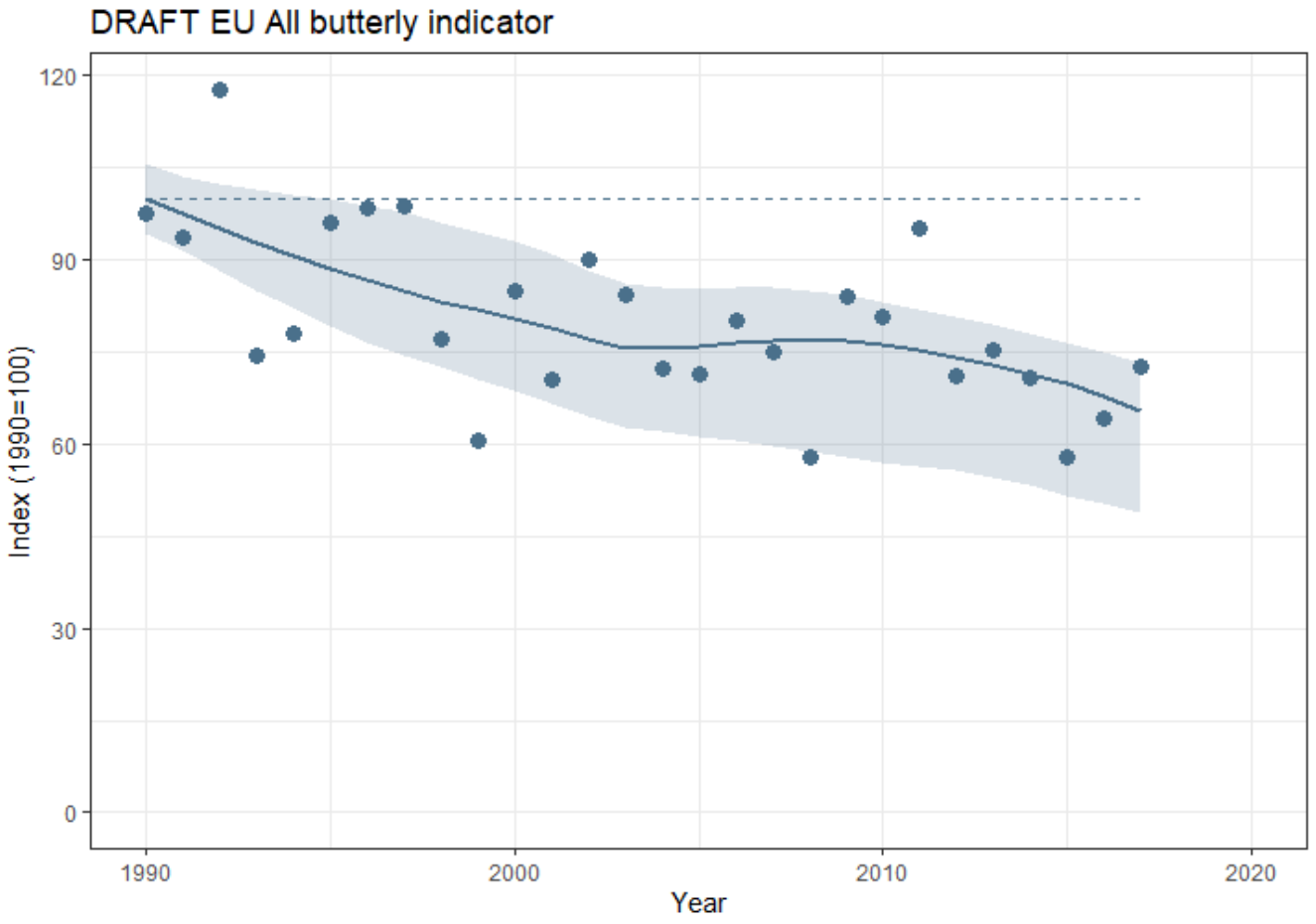
1-4
5-7
8-10
11-13
14-16

Europese aantalstrends

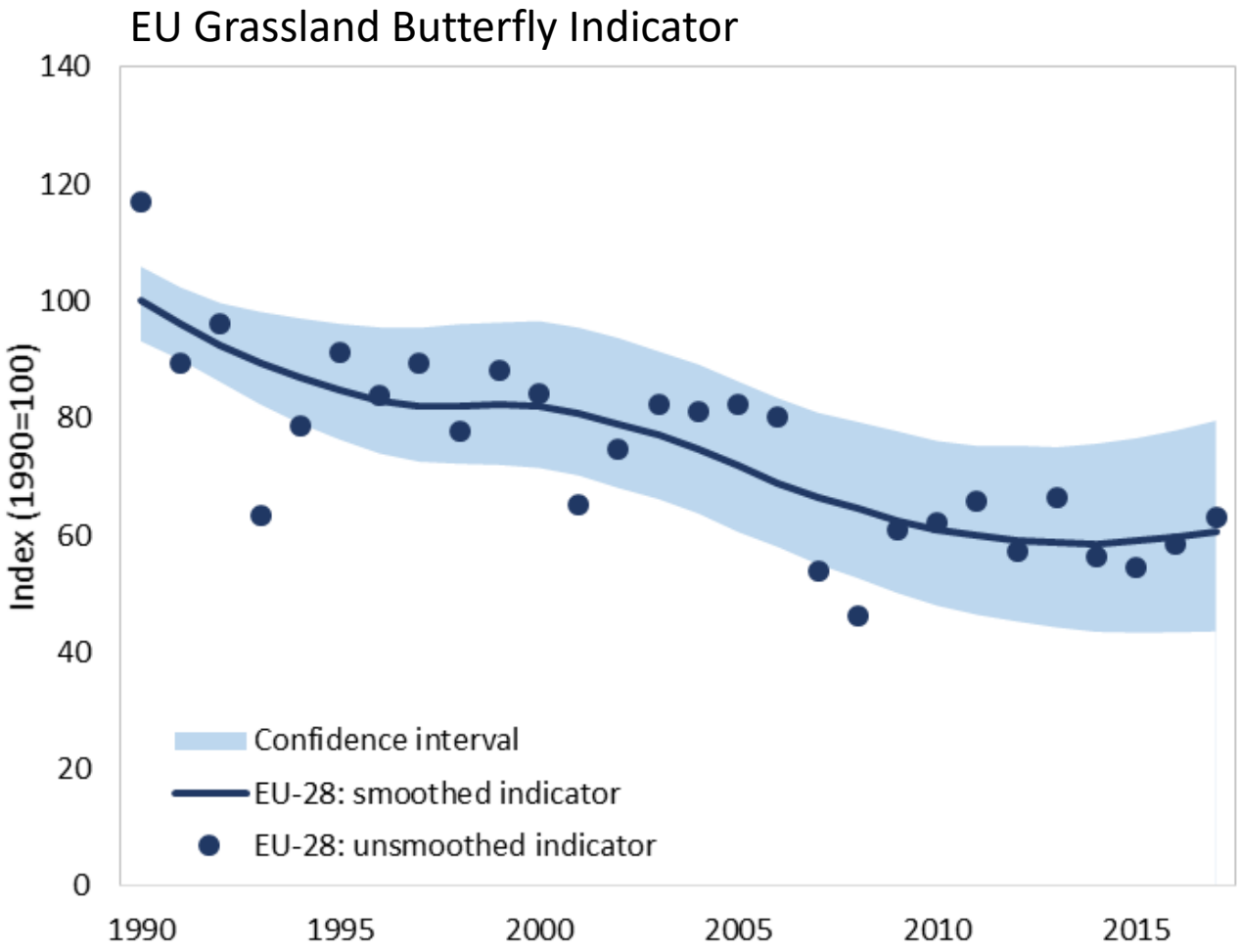


EU Soortgroepindicator



De Vlinderstichting

EU Habitatsoortgroepindicator



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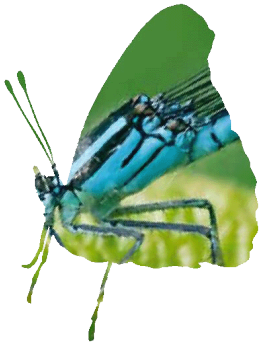


Opportunistische waarnemingen

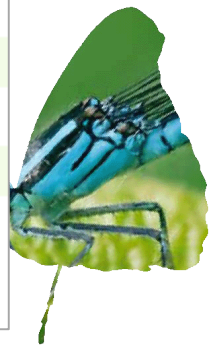
inbox verplaats naar

eerste <100- <10- vorige **1** **2** **3** **4** volgende 10+> 100+> laatste (837) 13379 records

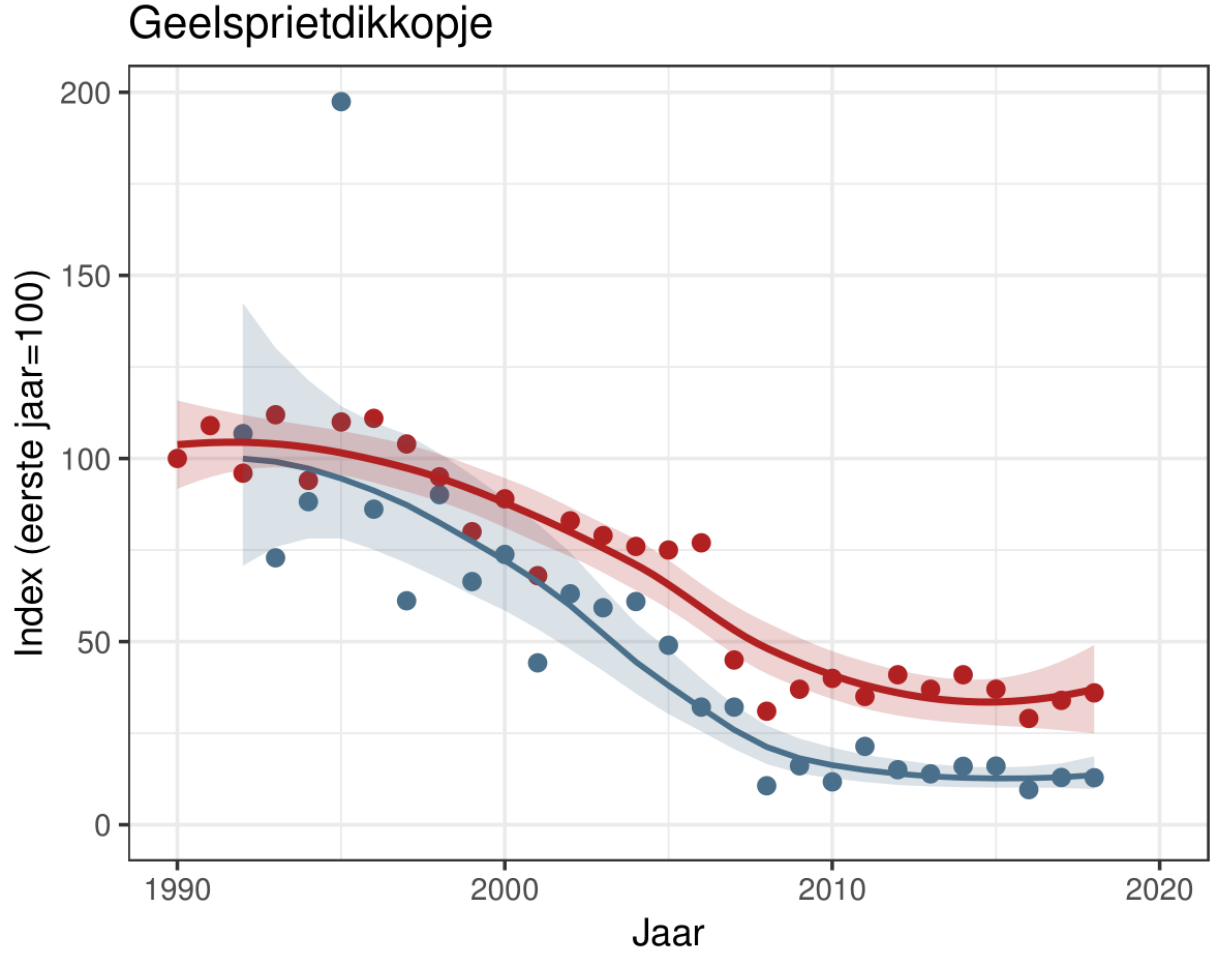
			soort	wet	datum	aantal	stadium / sekse	plaats
1	☐	✓	Atalanta		2-11-19	1	onbepaald	
2	☐	✓	Klein koolwitje		21-10-19	1	onbepaald	
3	☐	✓	Atalanta		21-10-19	1	onbepaald	
4	☐	✓	Atalanta		17-10-19	1	onbepaald	
5	☐	✓	Atalanta		14-10-19	1	onbepaald	
6	☐	✓	Atalanta		13-10-19	1	onbepaald	
7	☐	✓	Distelvlinder		5-10-19	1	onbepaald	
8	☐	✓	Atalanta		5-10-19	1	onbepaald	
9	☐	✓	Klein koolwitje		5-10-19	2	onbepaald	
10	☐	✓	Atalanta		2-10-19	1	onbepaald	
11	☐	✓	Oranje luzernevlinder		2-10-19	1	onbepaald	
12	☐	✓	Oranje luzernevlinder		2-10-19	1	onbepaald	
13	☐	✓	Kleine vuurvlinder		22-9-19	1	onbepaald	
14	☐	✓	Bont zandoogje		21-9-19	1	onbepaald	
15	☐	✓	Citroenvlinder		21-9-19	1	imago (adult)	
16	☐	✓	Atalanta		20-9-19	1	onbepaald	

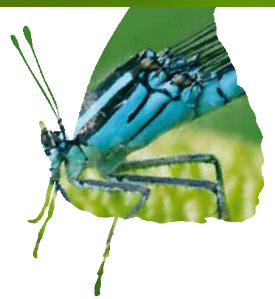
eerste <100- <10- vorige **1** **2** **3** **4** volgende 10+> 100+> laatste (837) 13379 records

De Vlinder



Nederlandse verspreidingstrends





De Vlinderstichting

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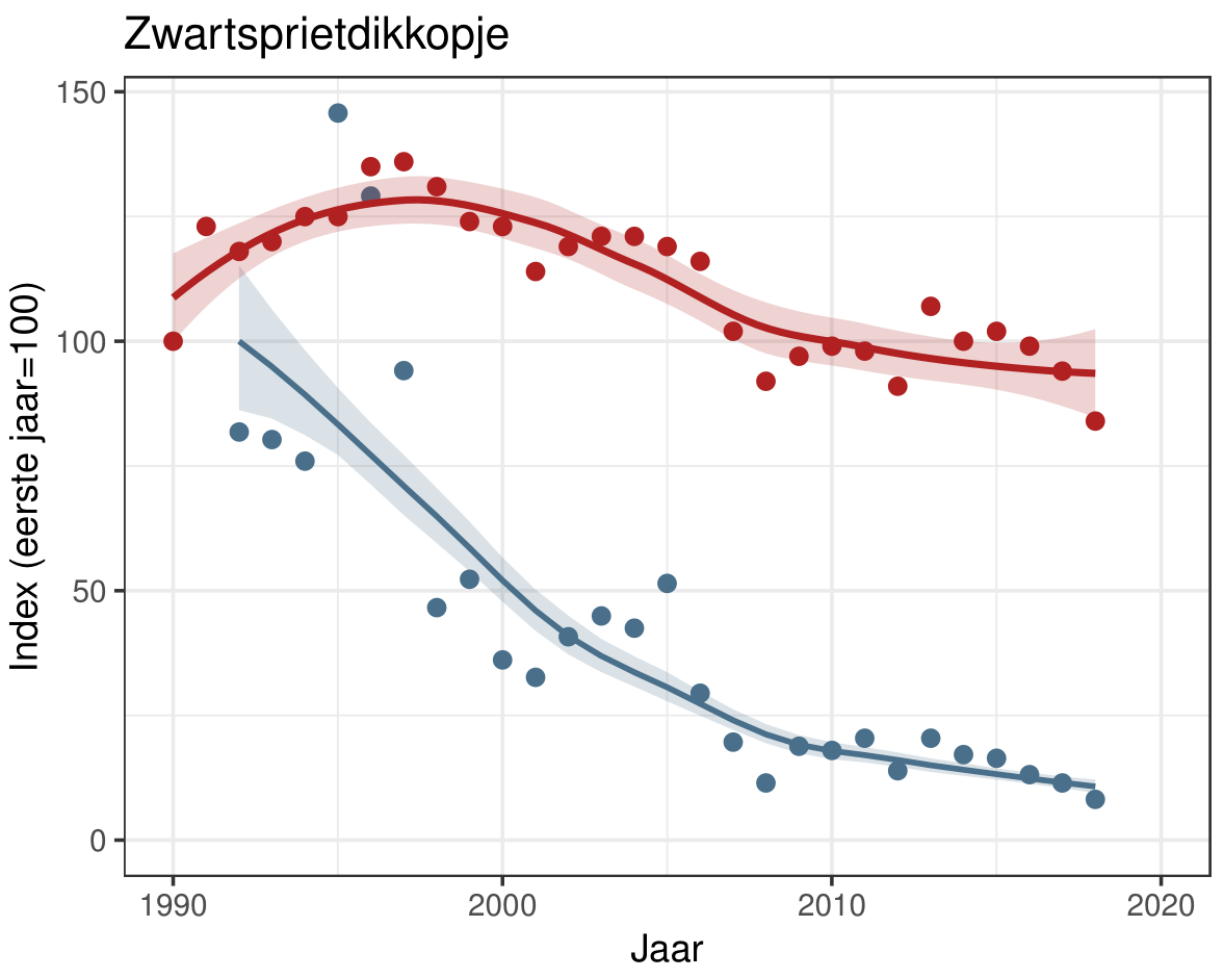

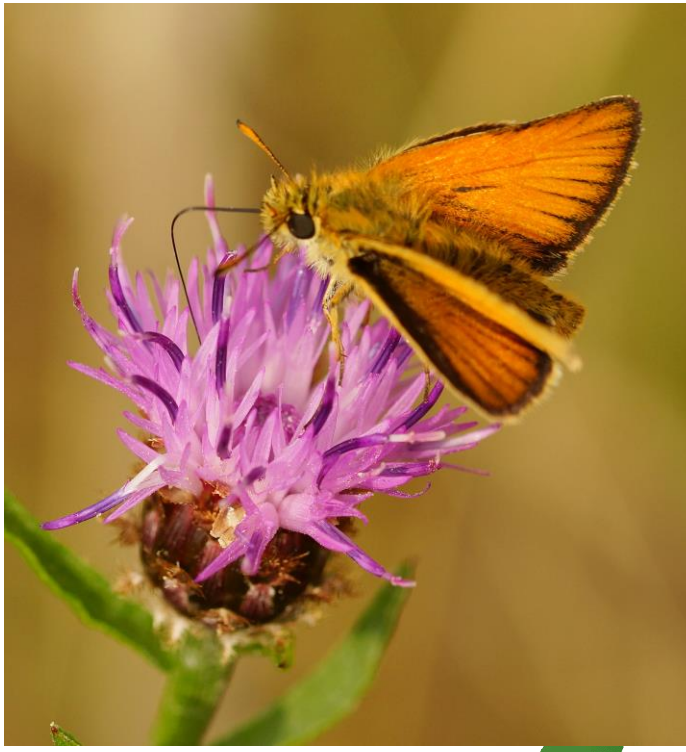

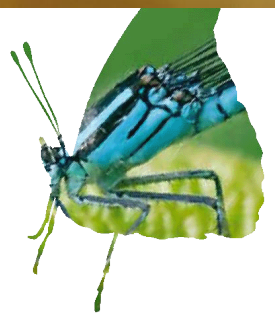

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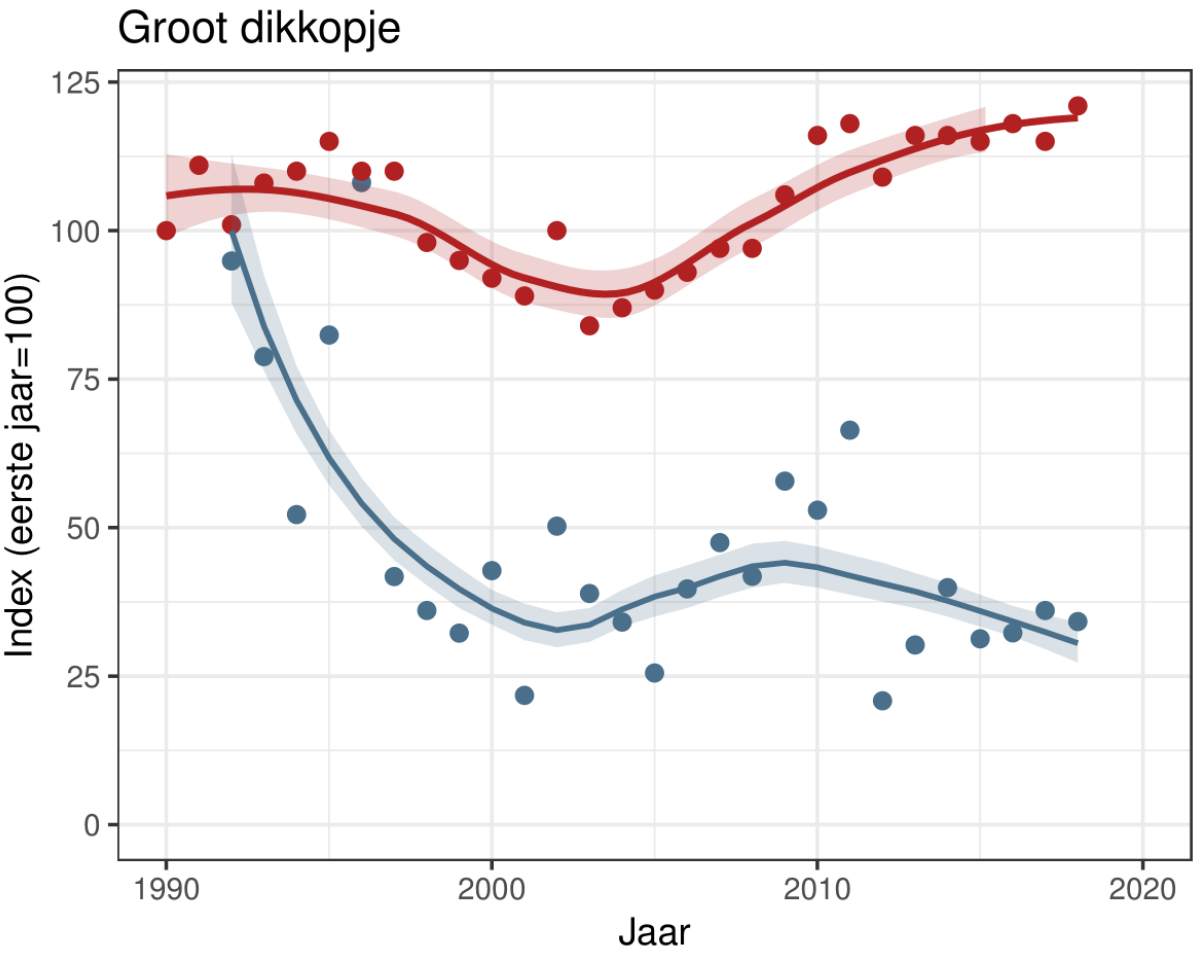
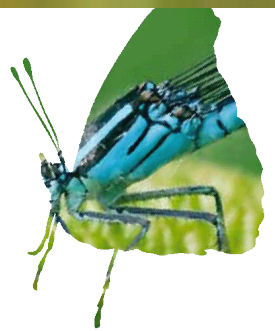
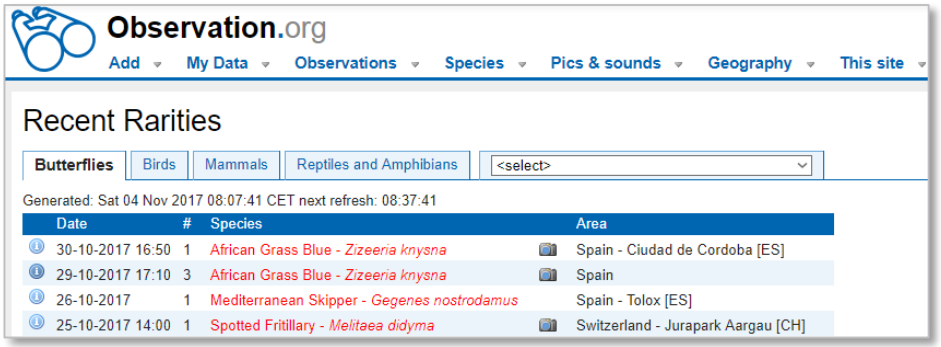
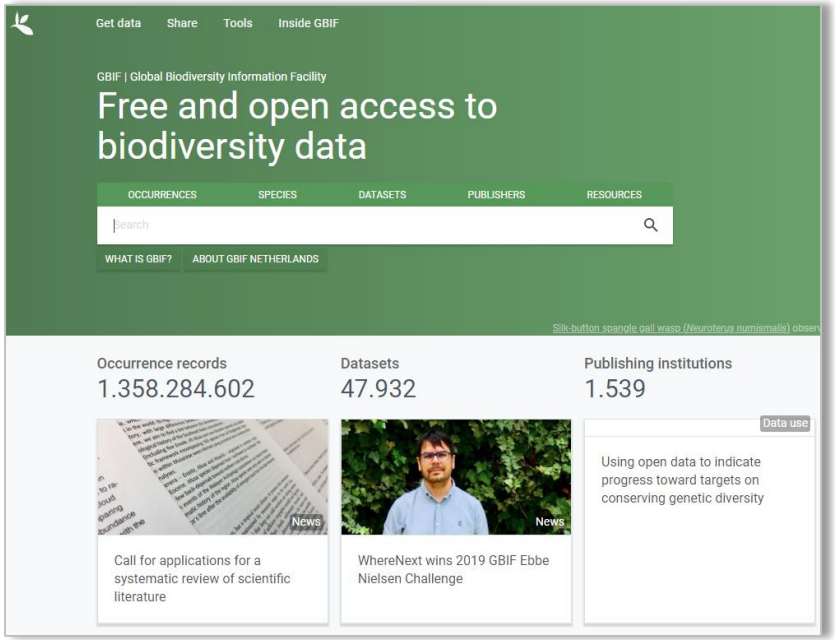


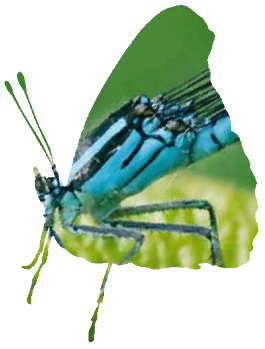


De Vlinderstichting

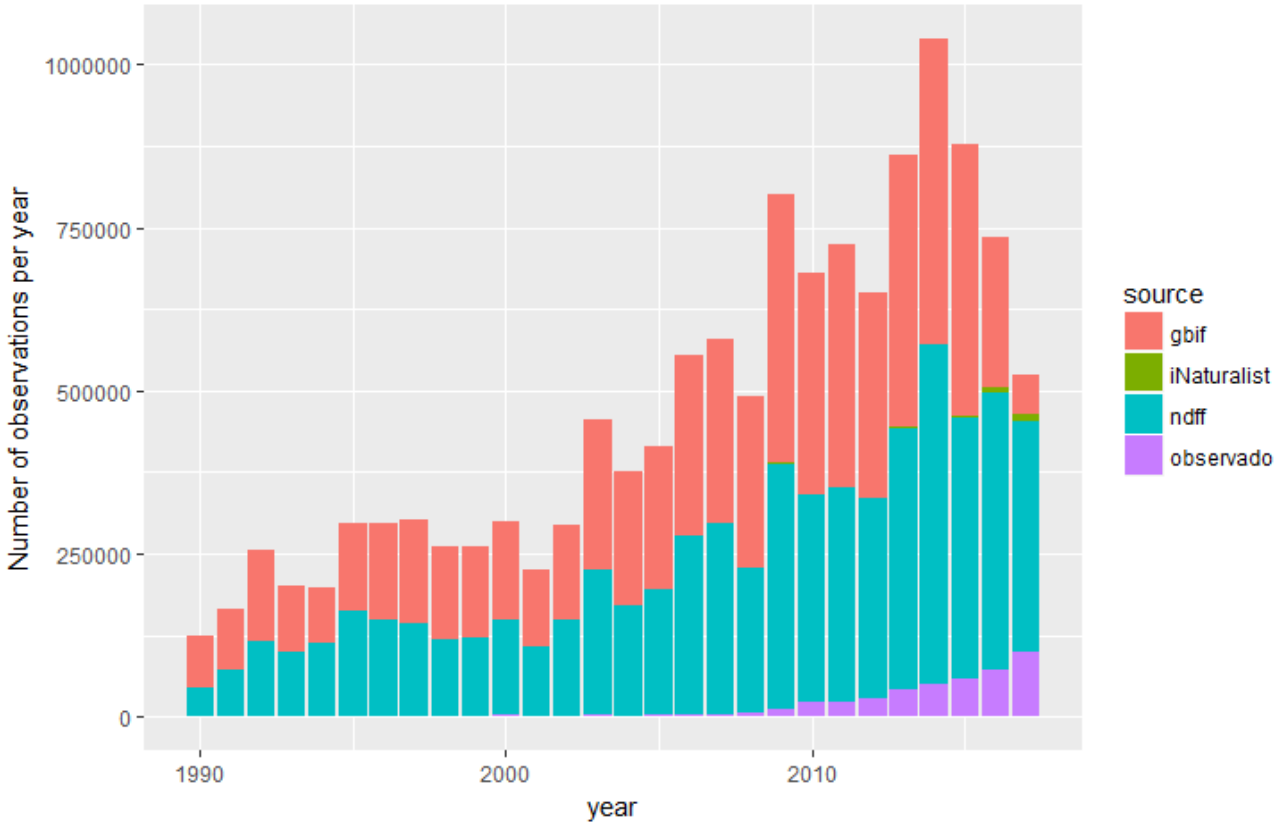
Europa: data uit vier bronnen

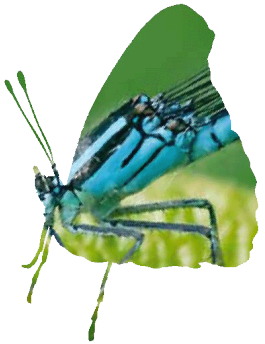






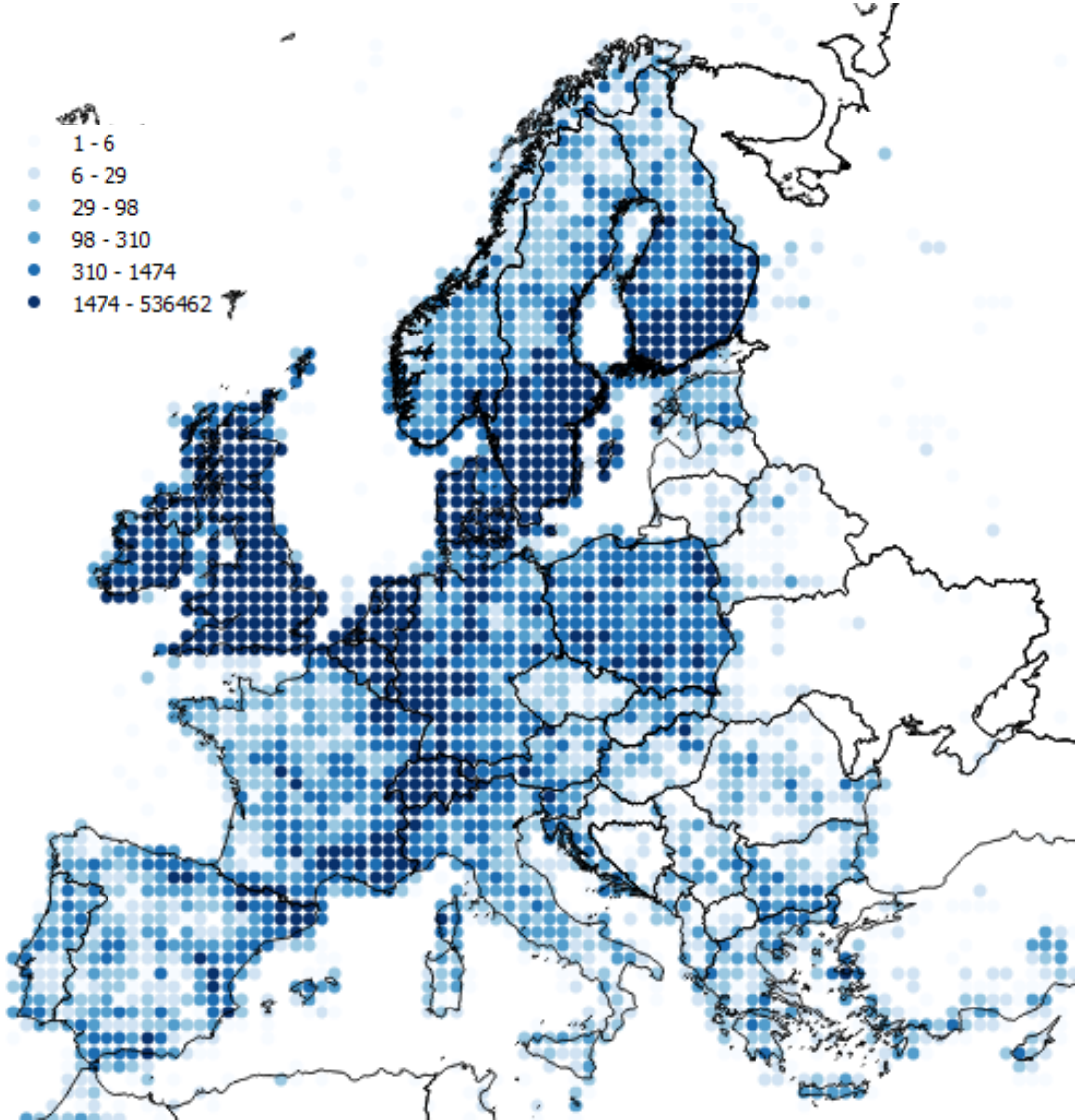
Aantal waarnemingen





De Vlinderstichting

Aantal waarnemingen per 50km hok



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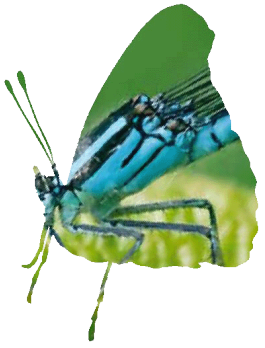
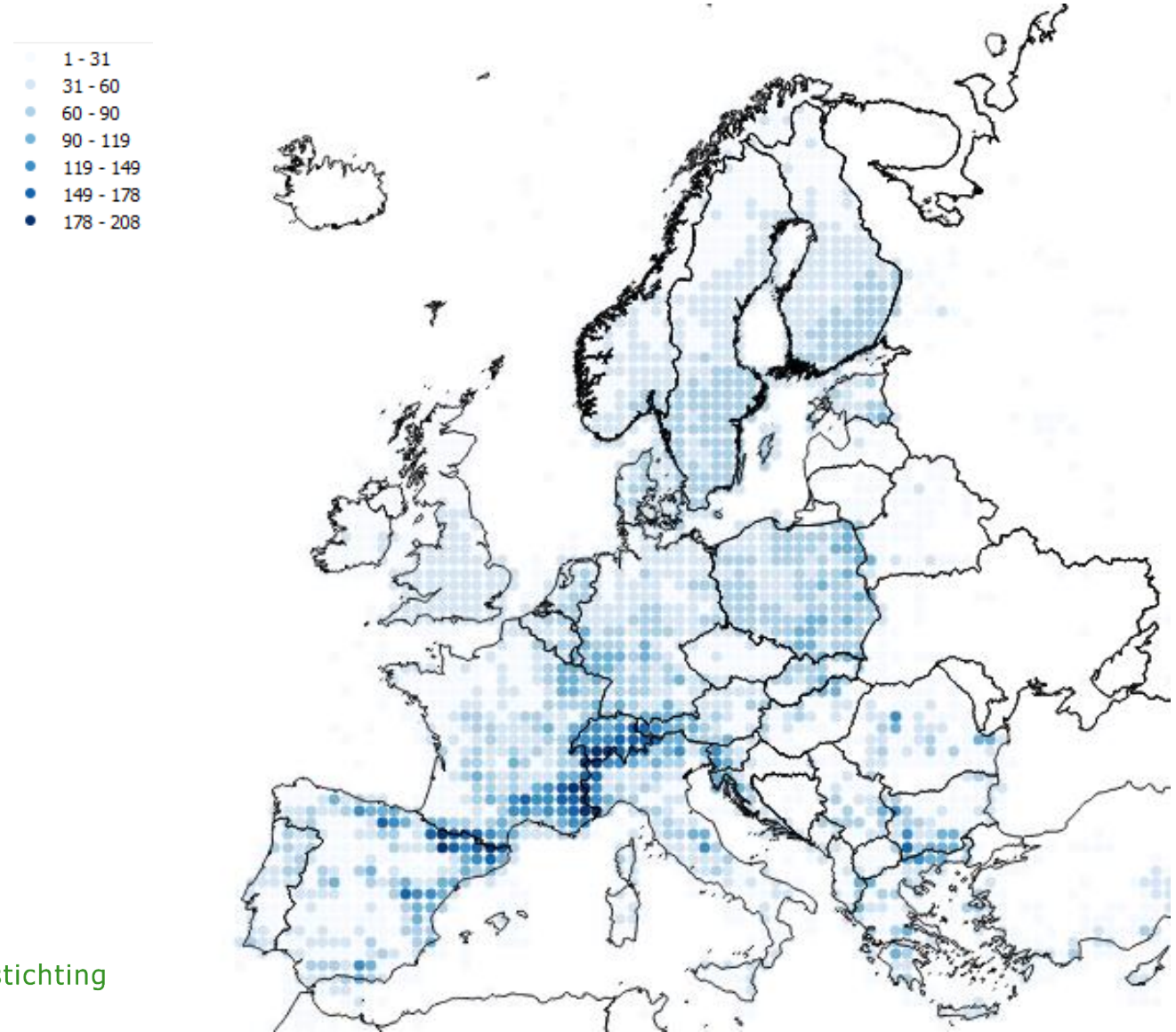


Aantal soorten per 50km hok



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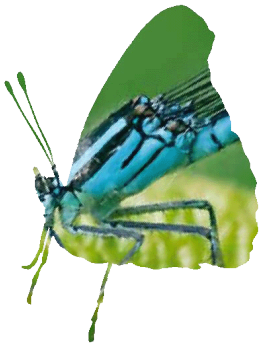
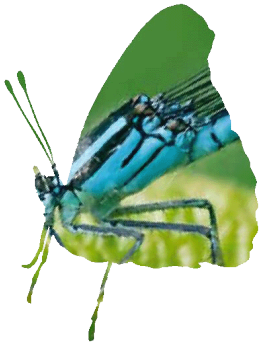


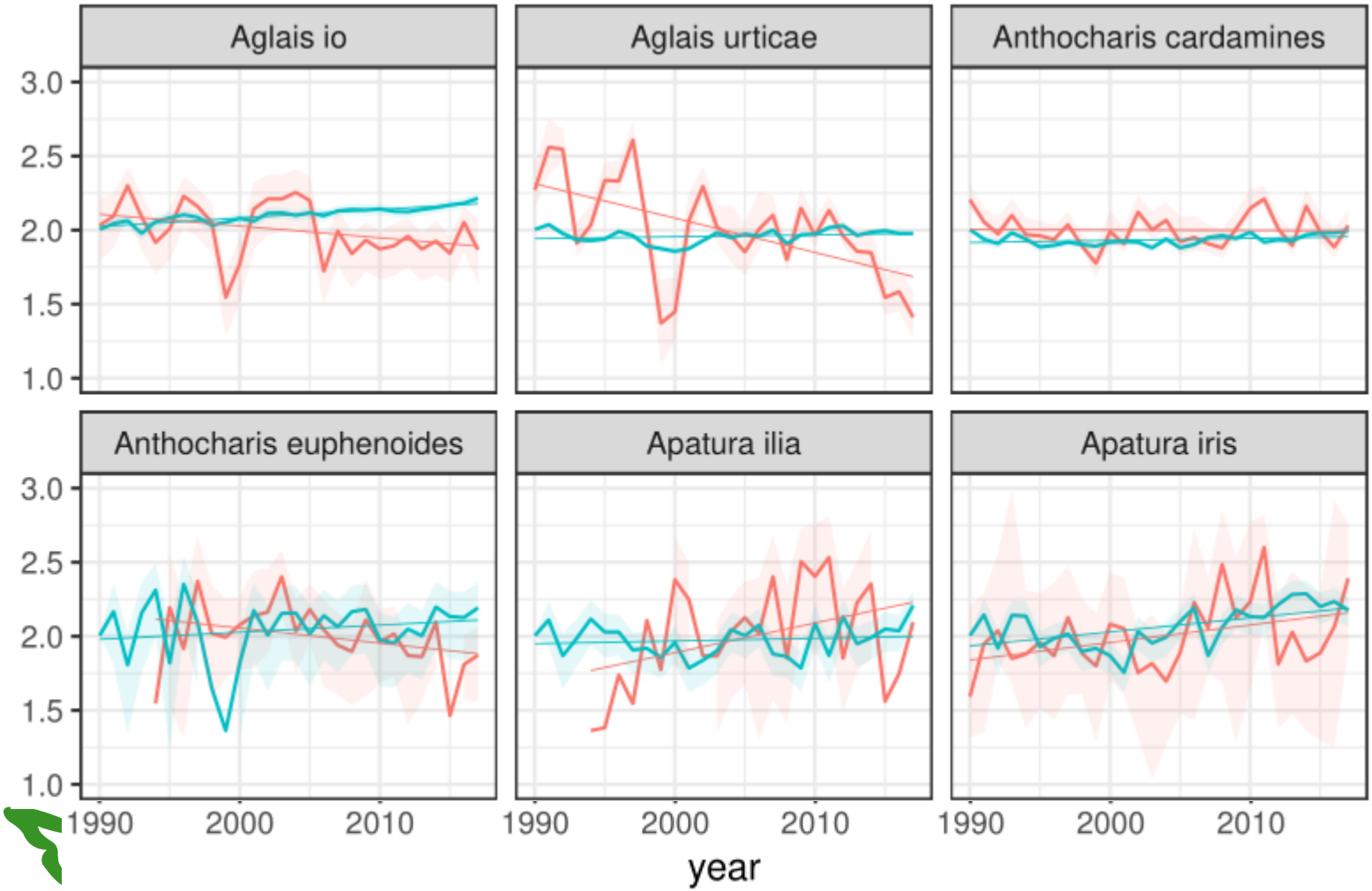
Opportunistische data 1990-2016

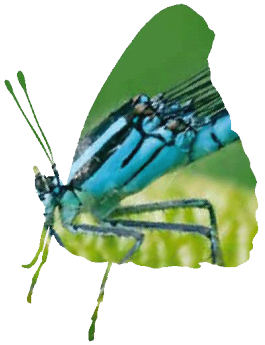
- 13 miljoen waarnemingen
- 34,000 hokken van 10x10km
- 257 soorten gemeld uit meer dan 50 hokken van 10x10km



De Vlinderstichting

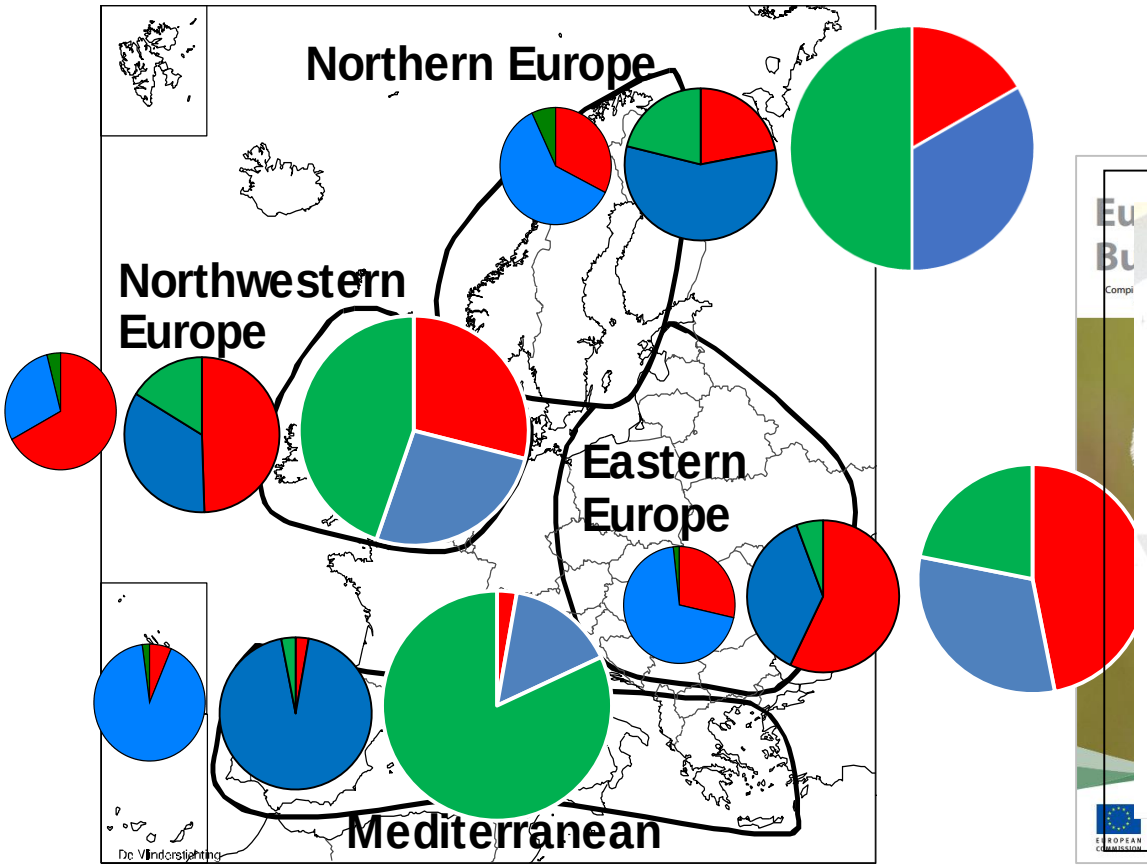
Europese aantals- en verspreidingstrends



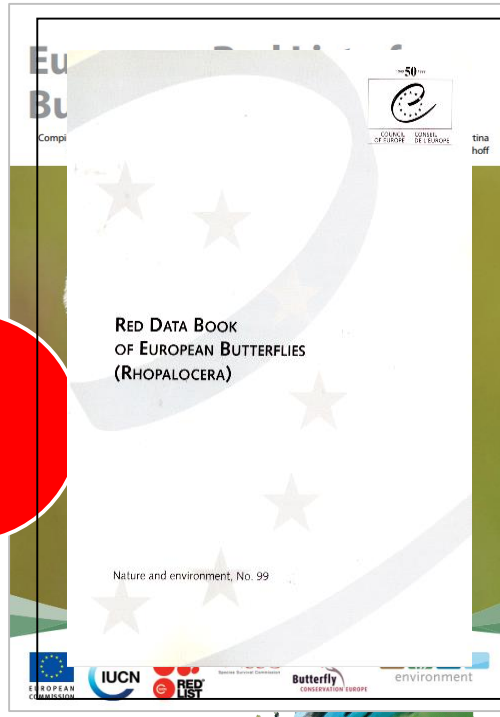


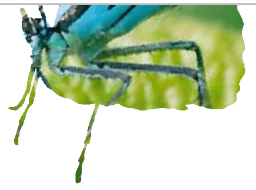
Trends in European regions

1970-1995 1998-2007 2007-2016



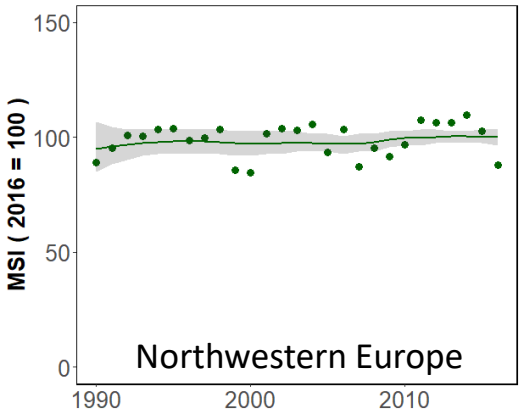
Increase
Stable
Decline

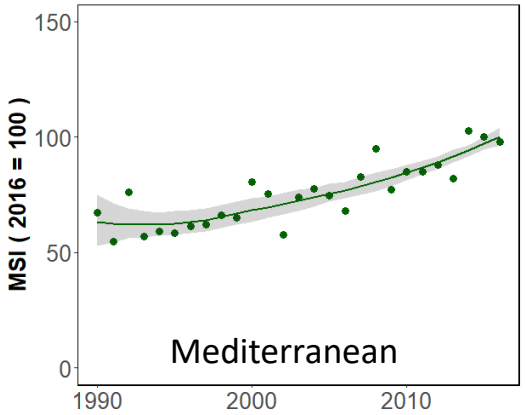


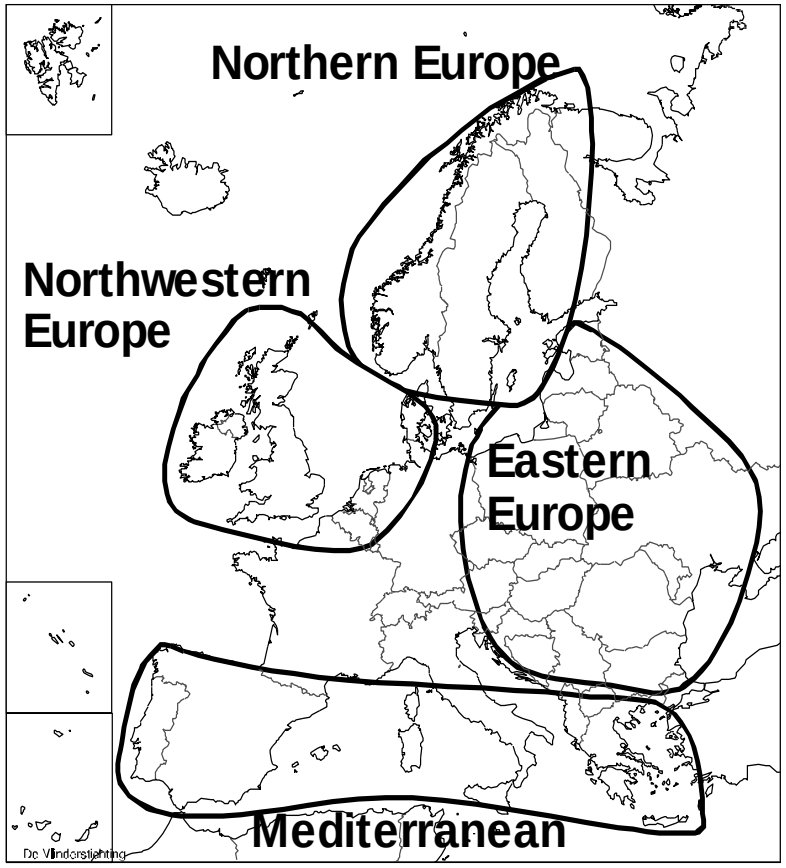


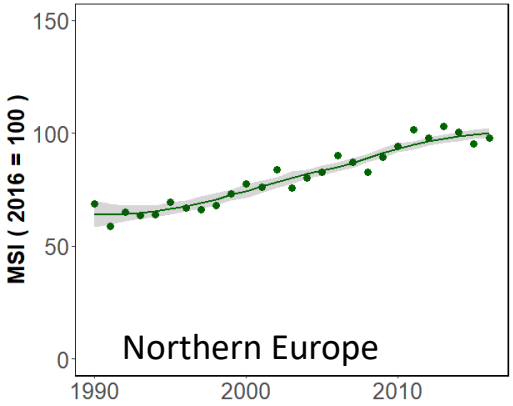
De Vlinderstichting

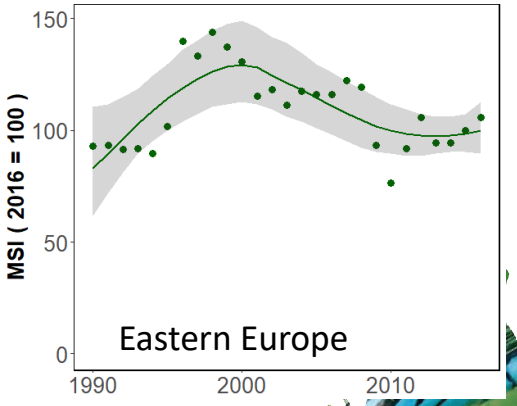
Multi Species Indicators (MSI) in European regions based on distribution trends



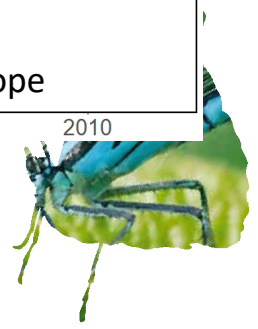






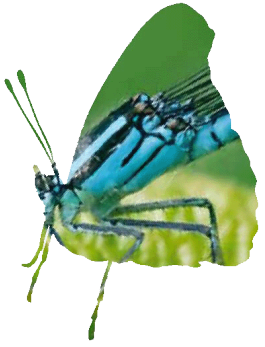


De Vlinderstichting



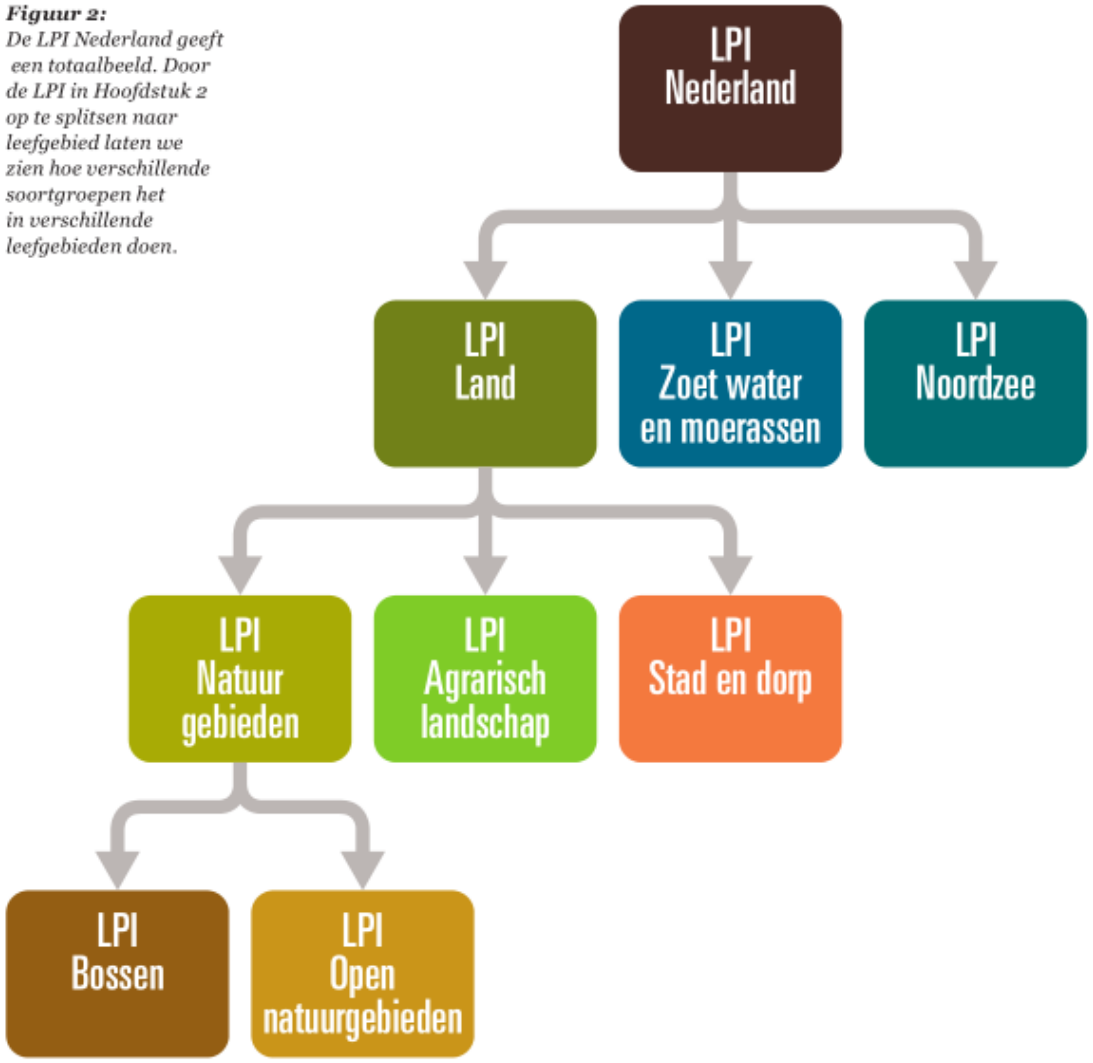
NL Trends in biodiversiteit

De Vlinderstichting

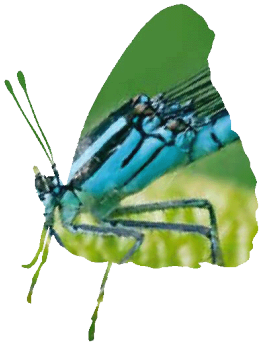


NL trends in biodiversiteit

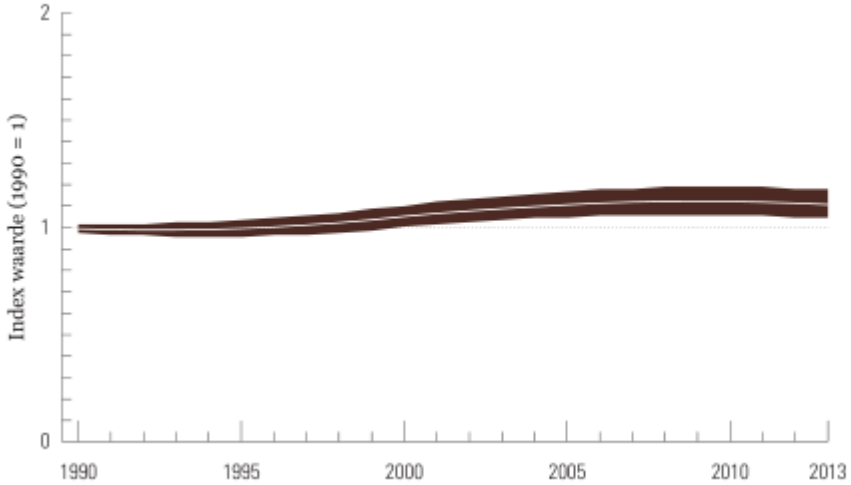
Figuur 2:
De LPI Nederland geeft een totaalbeeld. Door de LPI in Hoofdstuk 2 op te splitsen naar leefgebied laten we zien hoe verschillende soortgroepen het in verschillende leefgebieden doen.



De Vlinderstichting



NL trends in biodiversiteit



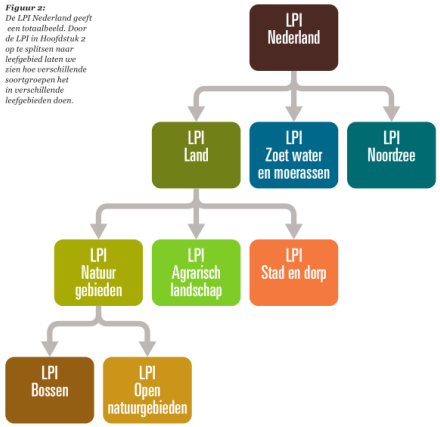
Figuur 1:
De LPI Nederland laat zien dat de populaties van 421 soorten dieren tussen 1990 en 2003 gemiddeld met 15 procent zijn toegenomen; daarna bleven ze stabiel.

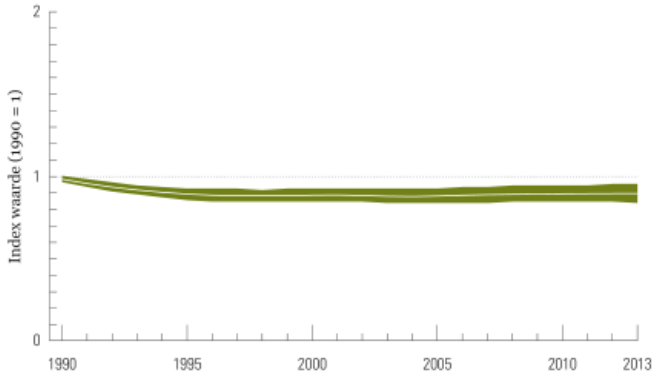
Legenda

LPI Nederland

Betrouwbaarheids-interval

Figuur 2:
De LPI Nederland geeft een totaalbeeld. Door de LPI in Hoofdstuk 2 op te splitsen naar leefgebied laten we zien hoe verschillende soortgroepen het in verschillende leefgebieden doen.



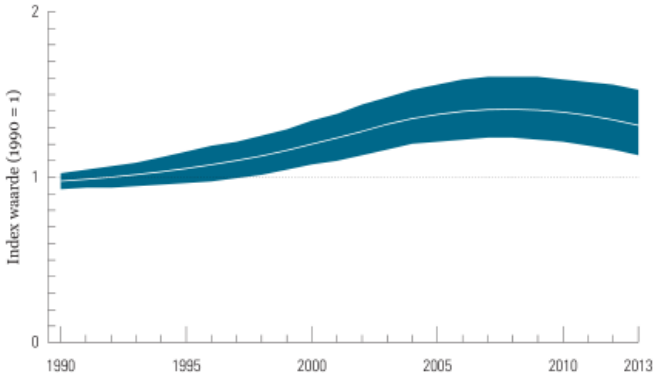


Figuur 5: LPI dieren op het land
De omvang van de populaties van diersoorten op het land bleven sinds 1990 gemiddeld stabiel. De index is gebaseerd op 215 soorten dagvlinders, zoogdieren, broedvogels en reptielen.

Legenda

LPI dieren op het land

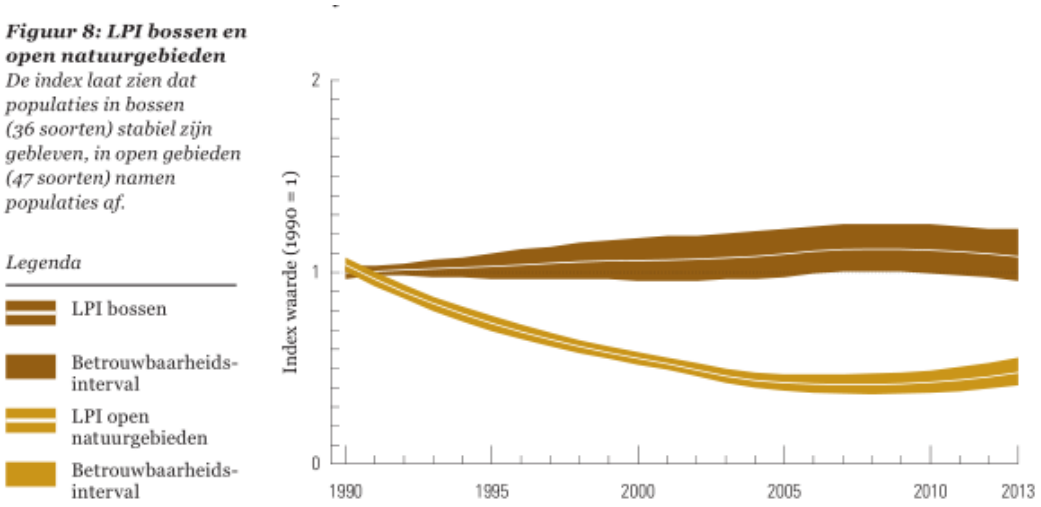
Betrouwbaarheids-interval



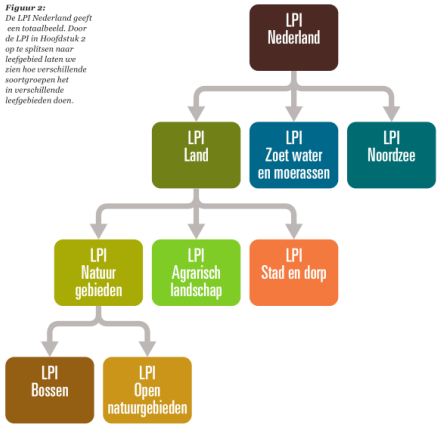
Figuur 11: LPI dieren in zoet water
De populatie omvang van dieren in zoet water is gemiddeld met 40 procent vooruitgegaan tussen 1990 en 2003 en daarna stabiel gebleven. De index is gebaseerd op 146 soorten libellen, zoogdieren, broedvogels, amfibieën, zoetwatervissen en de grote vuurvlinder. Vissen (37 soorten) bleven stabiel; libellen (57 soorten) namen toe en bleven de laatste tien jaar stabiel; vogels (31 soorten) namen gestaag

NL trends in biodiversiteit

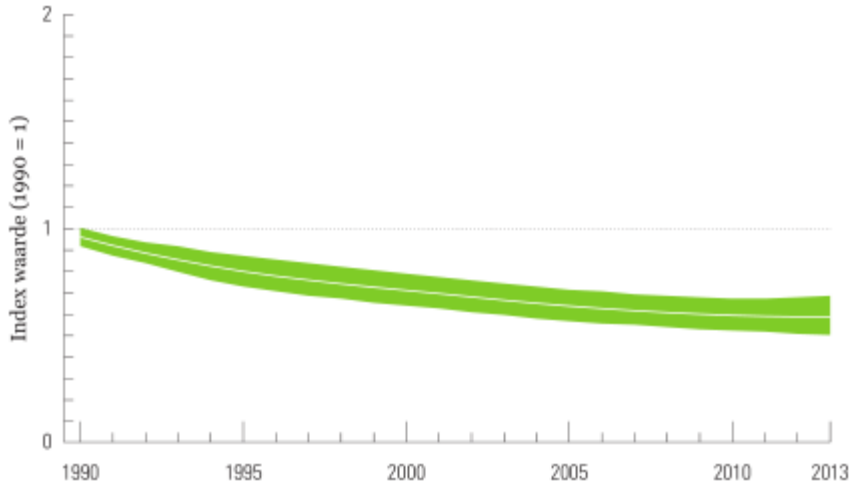
Figuur 8: LPI bossen en open natuurgebieden
De index laat zien dat populaties in bossen (36 soorten) stabiel zijn gebleven, in open gebieden (47 soorten) namen populaties af.



Figuur 2:
De LPI Nederland geeft een totaalbeeld. Door de LPI in Hoofdstuk 2 op te splitsen naar leefgebied laten we zien hoe verschillende soortgroepen het in verschillende leefgebieden doen.



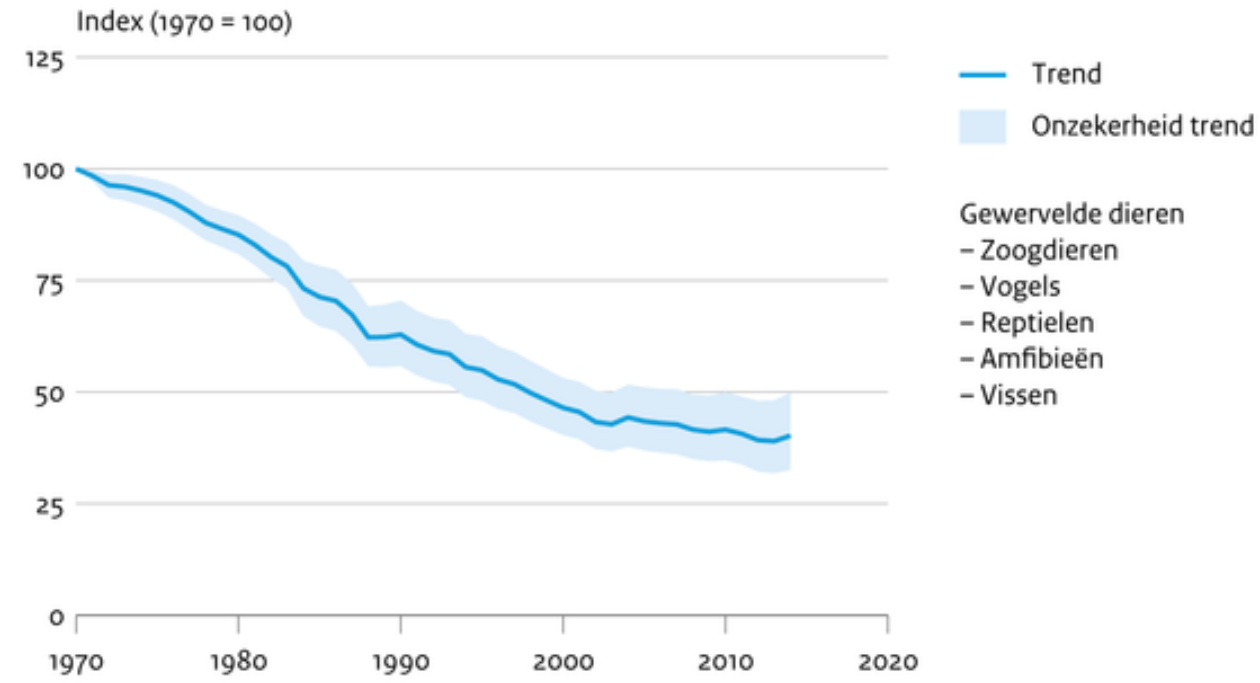
Figuur 9: LPI agrarisch landschap
De populatieomvang van diersoorten in agrarisch landschap daalde gemiddeld sterk met 40 procent tussen 1990 en 2013. De index is gebaseerd op 48 soorten dagvlinders, zoogdieren en broedvogels. Vogels (27 soorten) lieten een matige afname zien, vlinders (14 soorten) ook, maar zijn de laatste tien jaar stabiel gebleven.



De Vlinderstichting

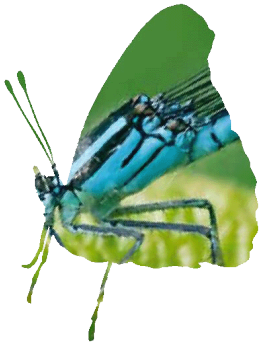
LPI mondiaal

Living Planet Index mondiaal



Bron: WWF, ZSL

CBS/apr19
www.clo.nl/nl156904

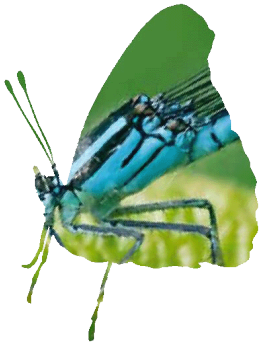


De Vlinderstichting

Habitatrichtlijn: artikel 17

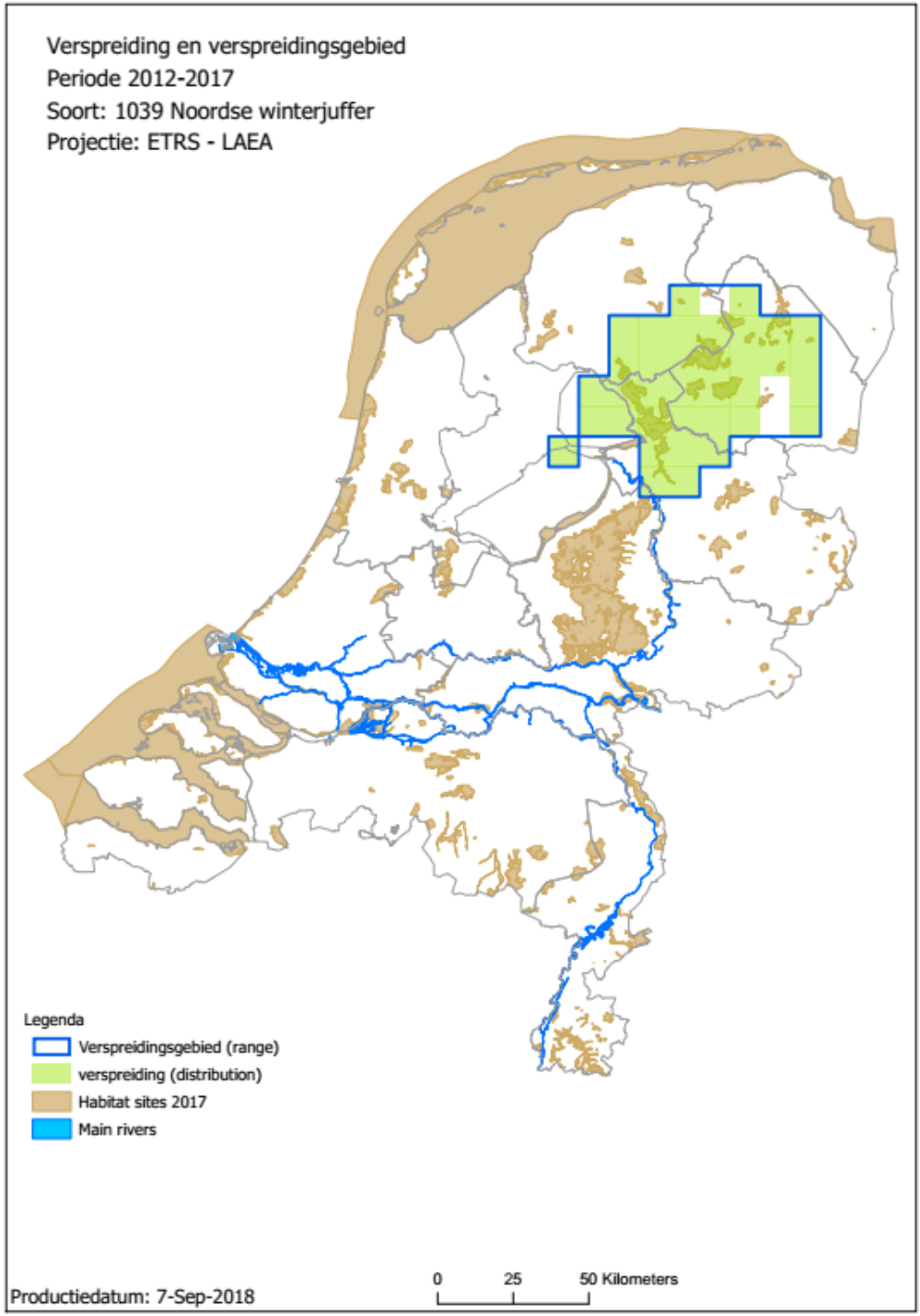
- Zesjaarlijke rapportage door de lidstaten van de EU over de Staat van Instandhouding van de habitats (Annex I) en soorten (Annexen II, IV en V) van de HR.
- Uitgevoerd in 2007, 2013 en 2019
- Vier hoofdonderdelen:
  - Range
  - Populatie
  - Habitat
  - Toekomstperspectief

De Vlinderstichting



Range

- Aantal hokken van 10x10km in ETRS projectie na het opvullen m.b.v. de zogenaamde rangetool
- Verbeteringen door soortexperts
- Daarna range vastgesteld



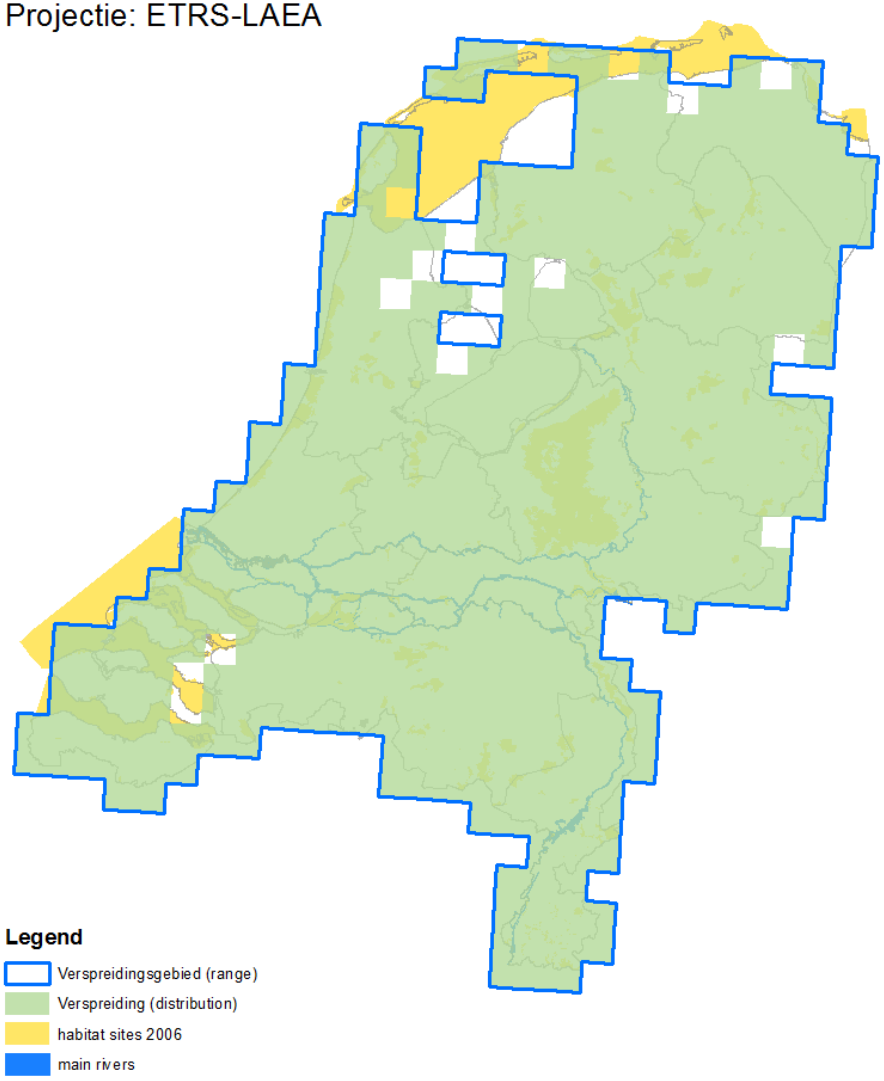
De Vlinderstichting

Verspreiding en verspreidingsgebied

Periode: 2007-2011

Soort: Bruine kikker *(Rana temporaria)*

Projectie: ETRS-LAEA

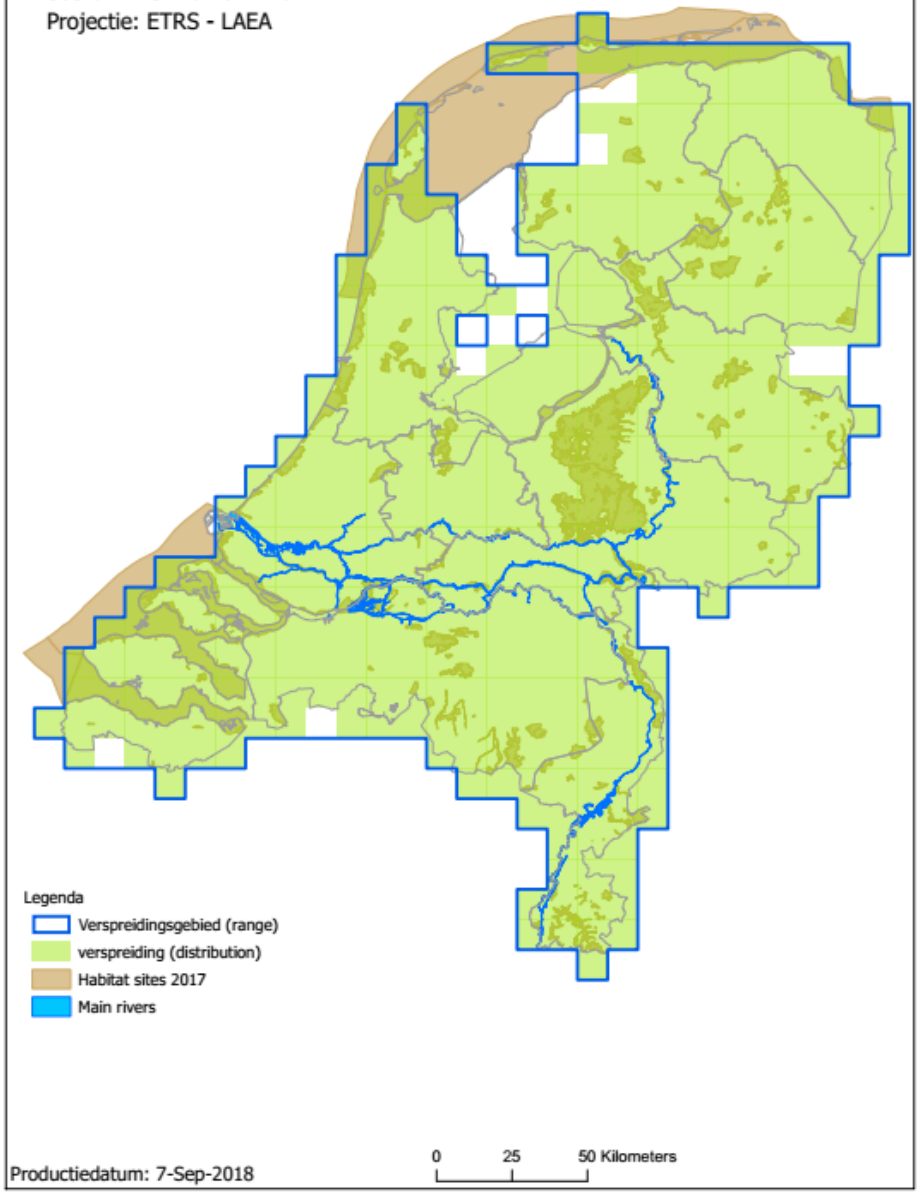


Verspreiding en verspreidingsgebied

Periode 2012-2017

Soort: 1213 Bruine kikker

Projectie: ETRS - LAEA



Verspreiding en verspreidingsgebied

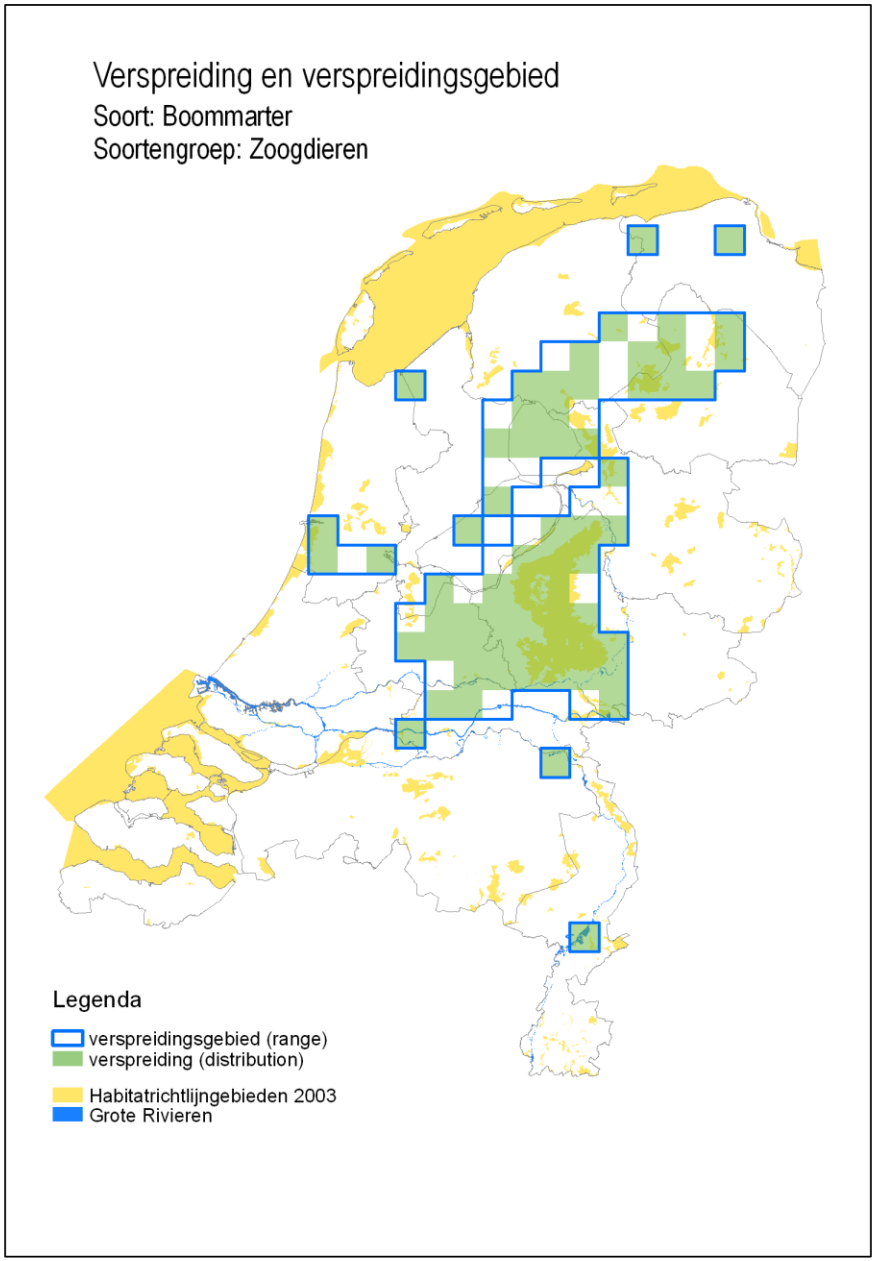
Periode: 2007-2011

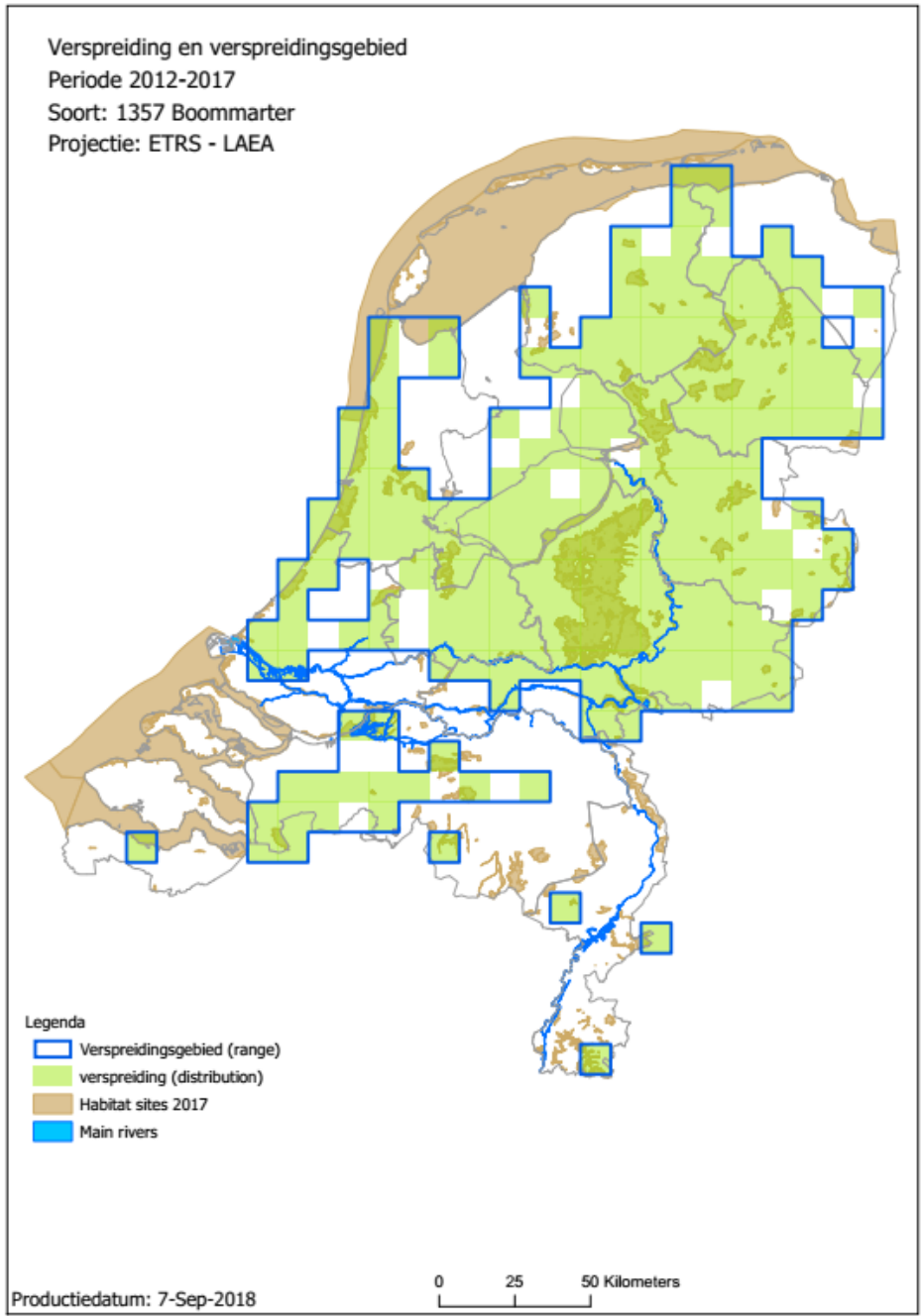
Soort: Pimpernelblauwtje *(Maculinea teleius)*

Projectie: ETRS-LAEA

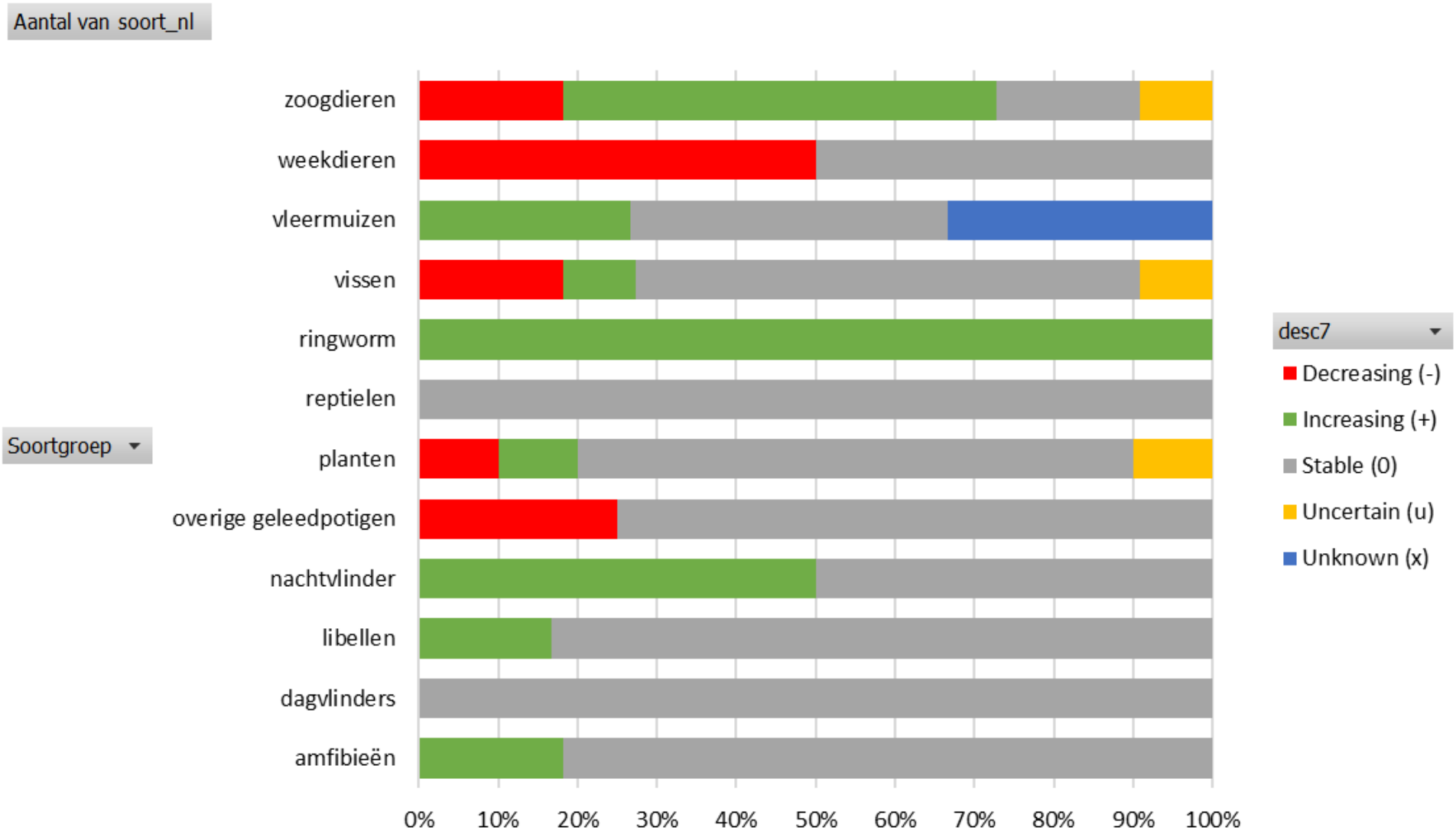
Verspreiding en verspreidingsgebied
Periode 2012-2017
Soort: 1059 pimpernelblauwtje
Projectie: ETRS - LAEA

Productiedatum: 7-Sep-2018

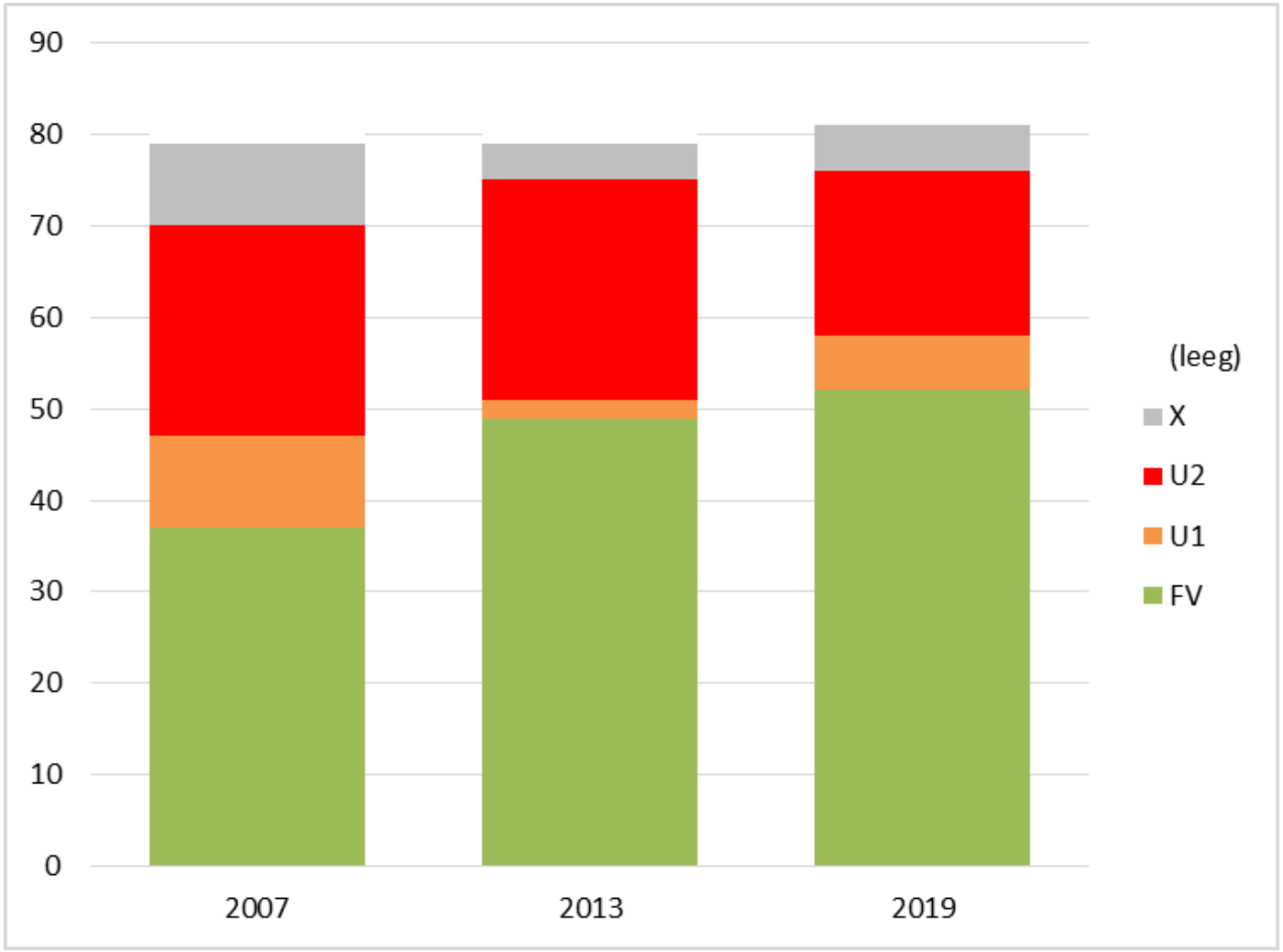

Verspreiding en verspreidingsgebied
Soort: Boommarter
Soortengroep: Zoogdieren
Legenda
verspreidingsgebied (range)
verspreiding (distribution)
Habitatrichtlijngebieden 2003
Grote Rivieren


Verspreiding en verspreidingsgebied
Periode 2012-2017
Soort: 1357 Boommarter
Projectie: ETRS - LAEA
Legenda
Verspreidingsgebied (range)
verspreiding (distribution)
Habitat sites 2017
Main rivers
Productiedatum: 7-Sep-2018
0
25
50 Kilometers

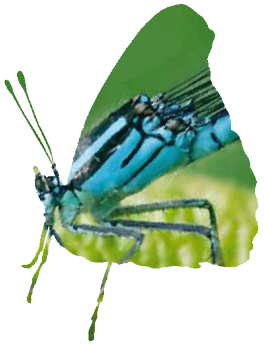
Rangetrend 2006-2017



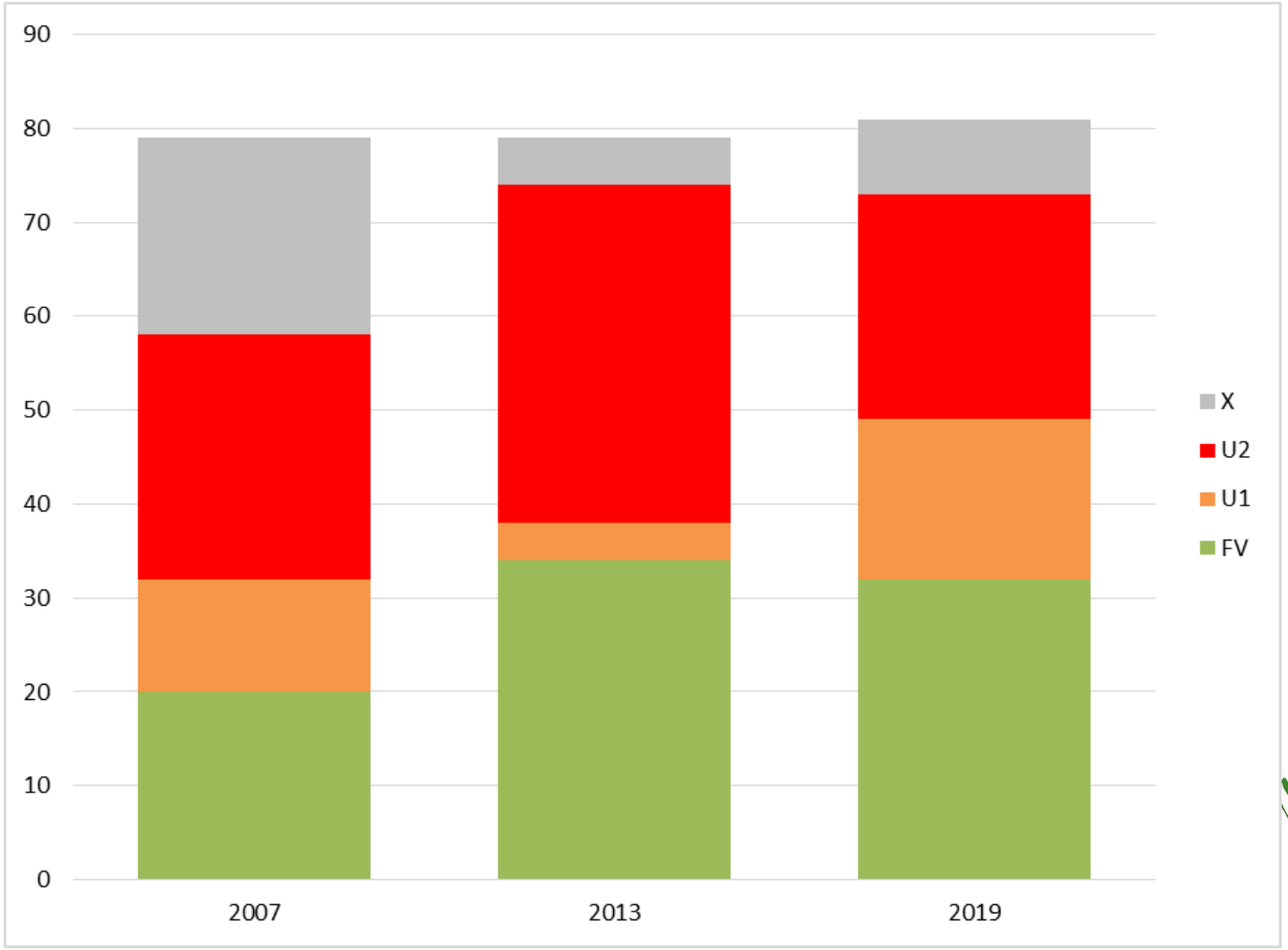
Range: Staat van Instandhouding



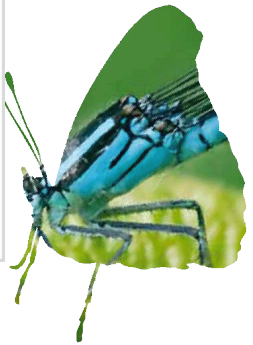
De Vlinderstichting



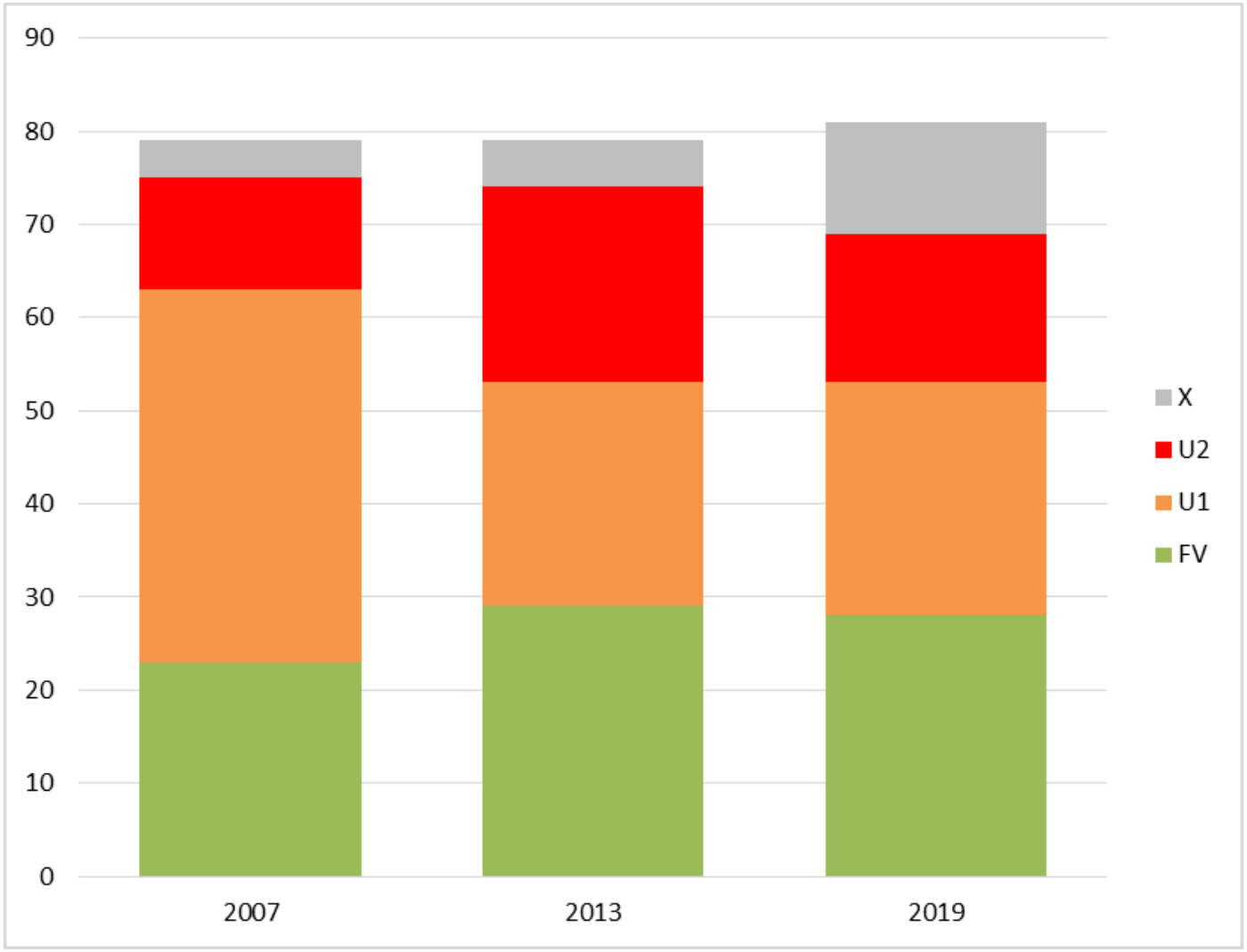
Populatie: Staat van Instandhouding



De Vlinderstichting



Habitat: Staat van Instandhouding



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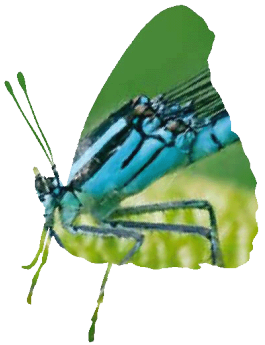
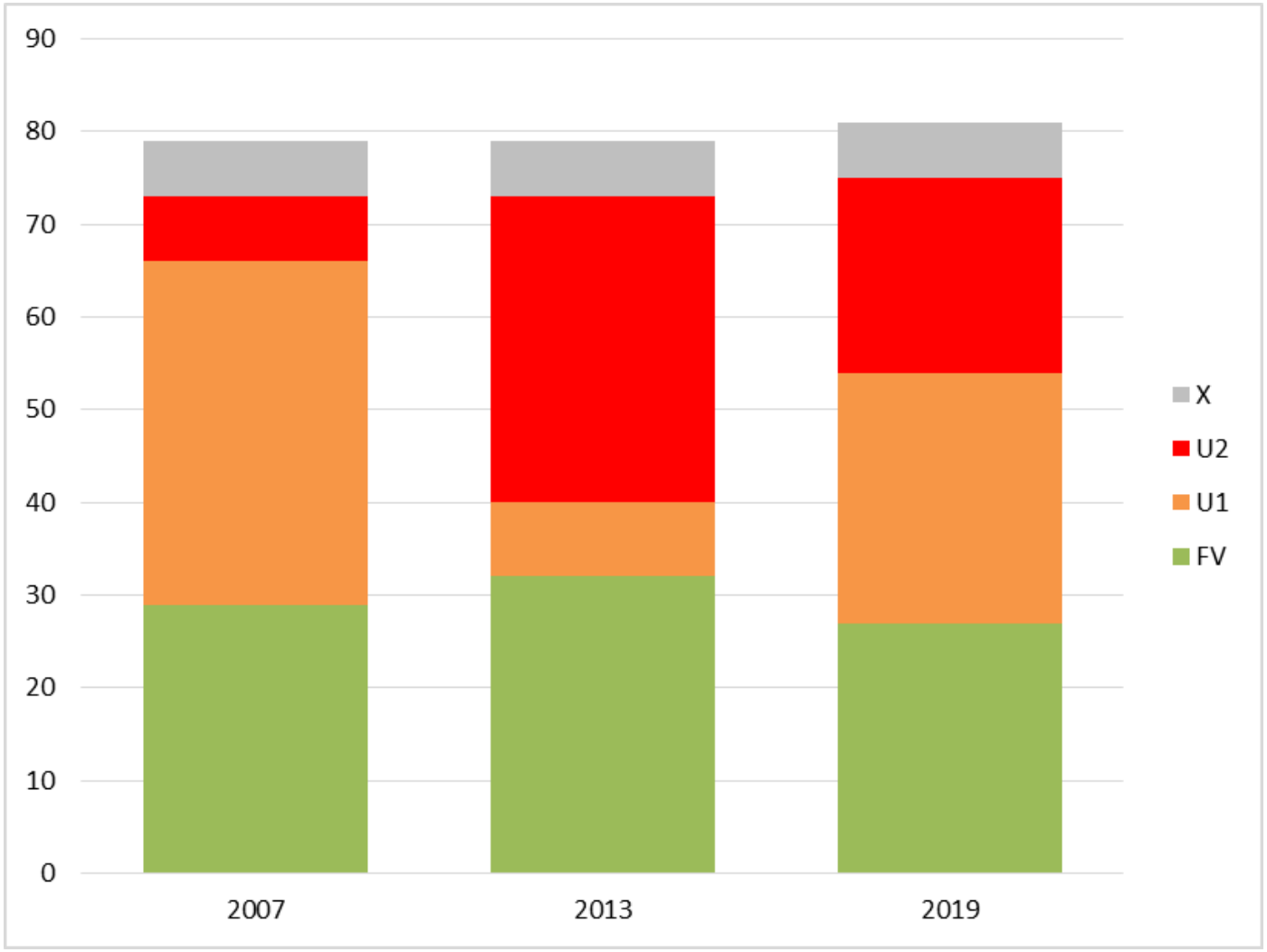
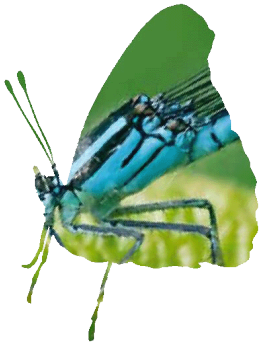


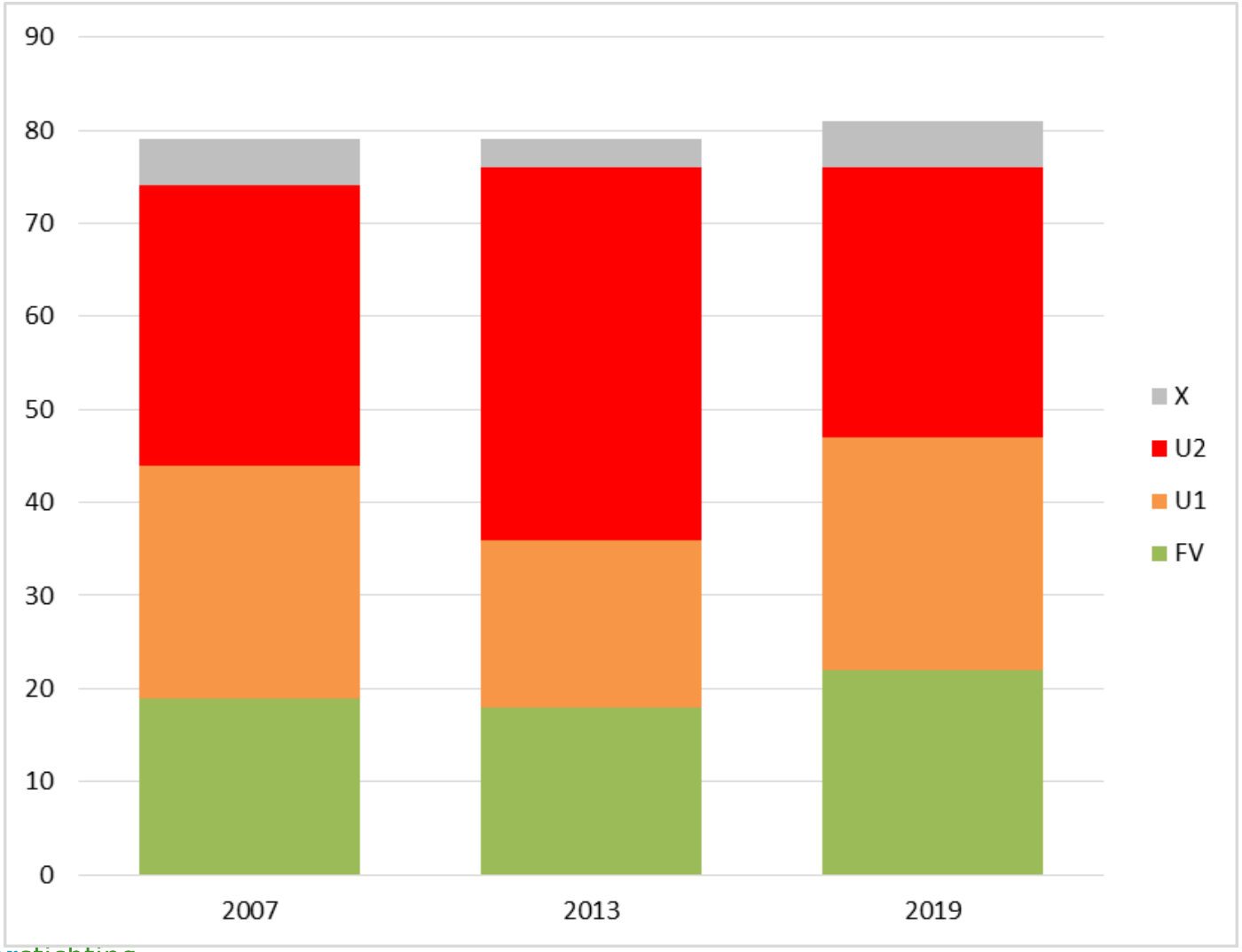
Toekomst: Staat van Instandhouding



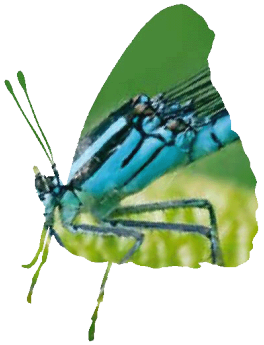
De Vlinderstichting



Totaal: Staat van Instandhouding

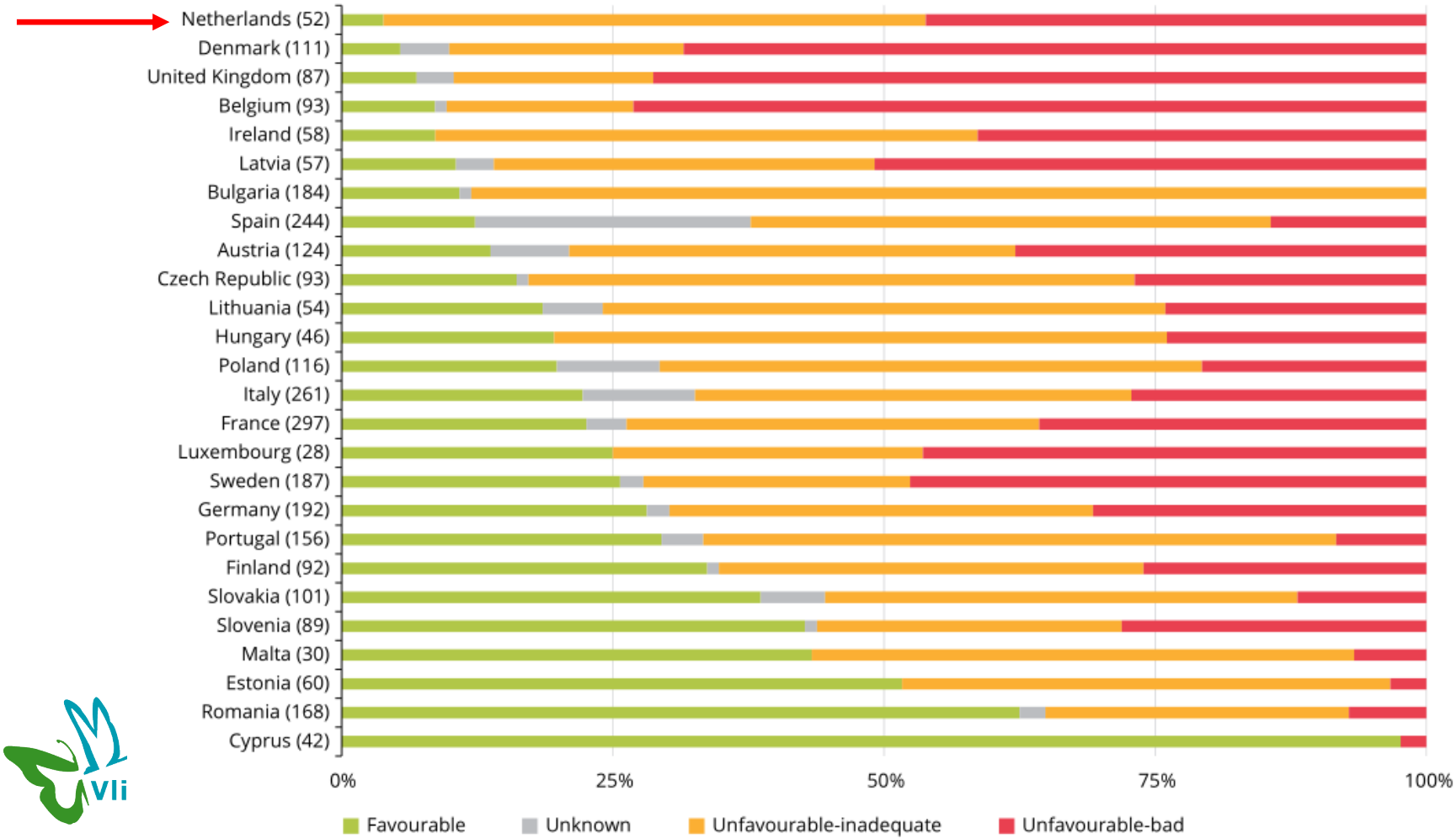


De Vlinderstichting



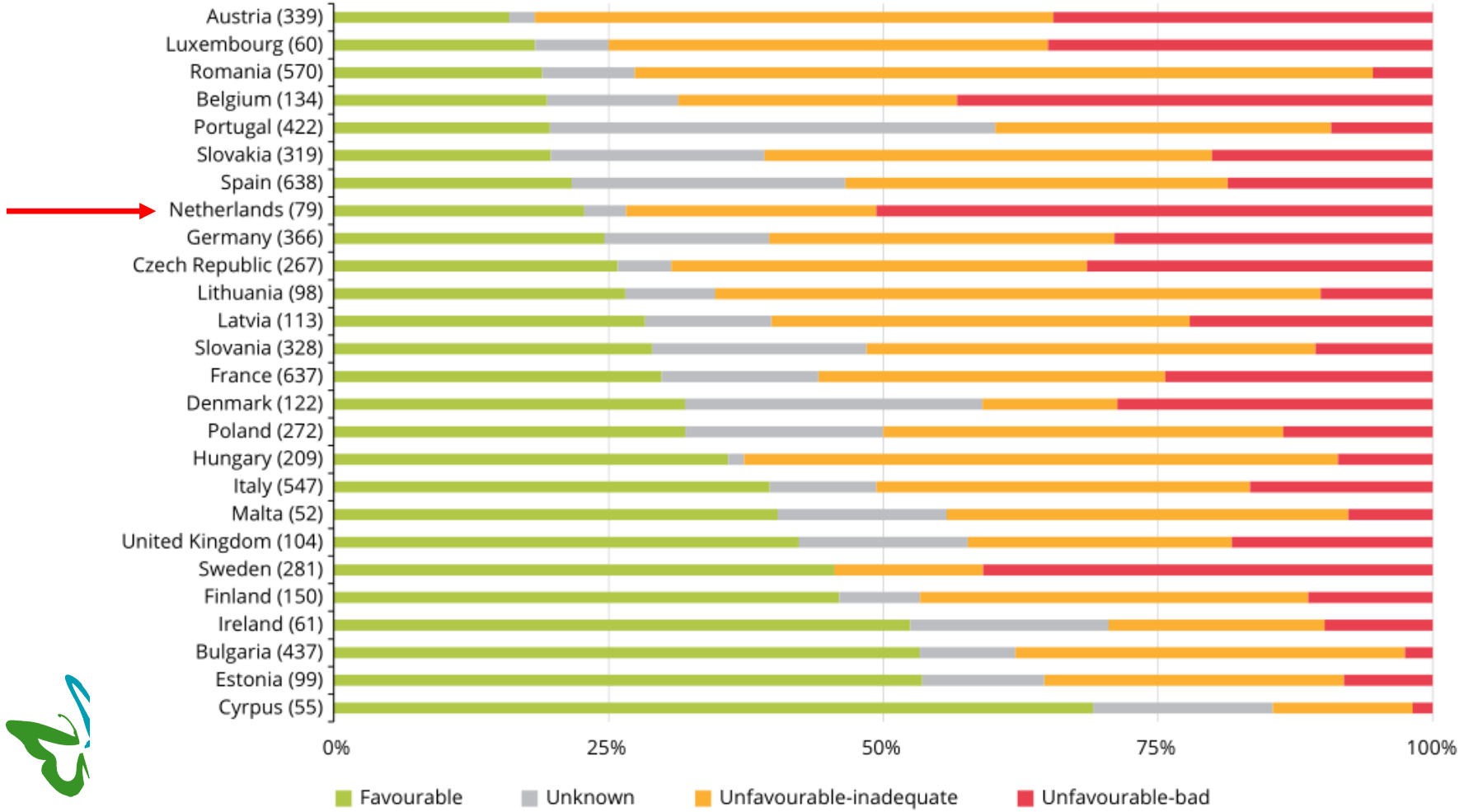
EU trends in biodiversiteit

Figure 3.1 **Proportion of habitat assessments in each conservation class (FV, XX, U1, U2), per Member State, 2007–2012**



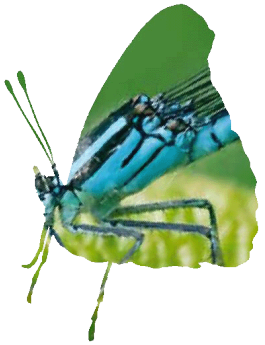
EU trends in biodiversiteit

Figure 3.4 **Proportion of species assessments in each conservation status class (FV, XX, U1, U2), per Member State (2007–2012)**



Trends in biodiversiteit

- Er wordt al veel gemeten!
- Monitoren via protocol levert populatietrends
- Opportunistische data levert verspreidingstrends
- Art 17 rapportage: officiële rapportage EU
- Lange tijdreeksen zijn heel belangrijk
- Monitor effecten beheermaatregelen op lange termijn
- Zo werken naar evidence-based conservation



De Vlinderstichting

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