

Monitoring

Pledge networking event butterflies

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De Vlinderstichting / Dutch Butterfly Conservation

Butterfly Conservation Europe

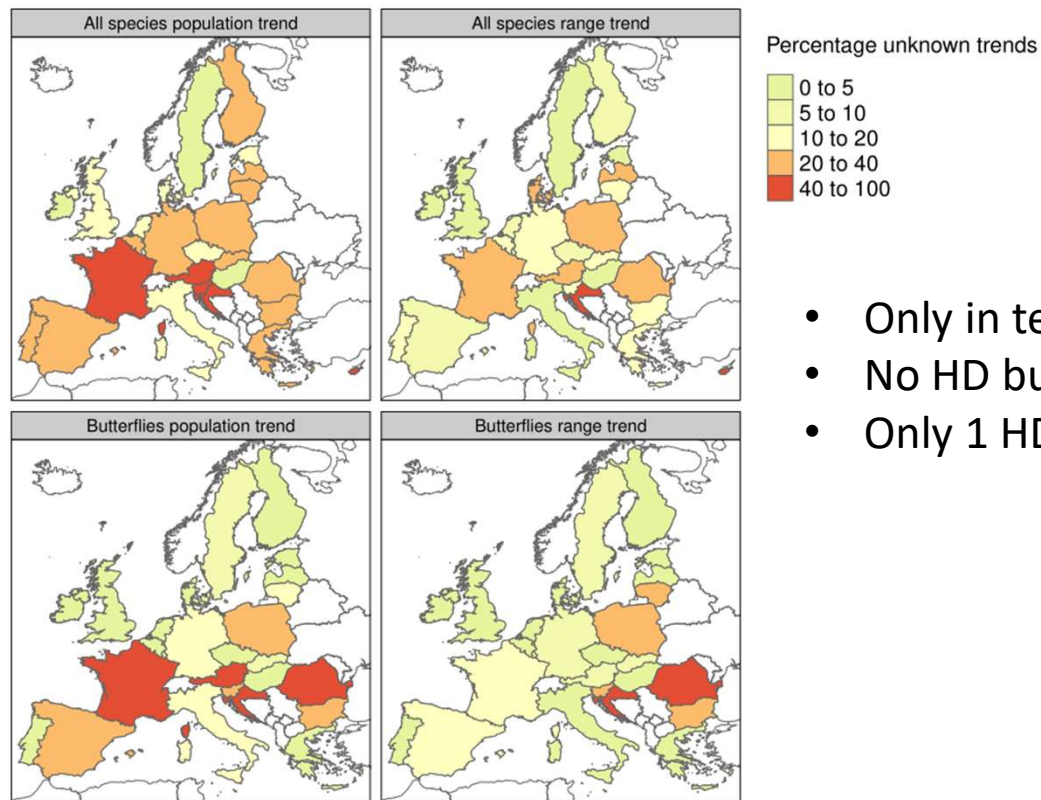


What monitoring?

- For article 17 reporting:
 - Distribution (range) in number of 10 km²
 - Trend in range
 - Population size (number of km² in last reporting, number of adults in next reporting in 2025 (?))
 - Population trend
- Distribution trend != Population trend



Art. 17 reporting 2019



- Only in terrestrial Biogeographic Regions
- No HD butterfly species on Malta and Cyprus
- Only 1 HD butterfly in Ireland and Portugal



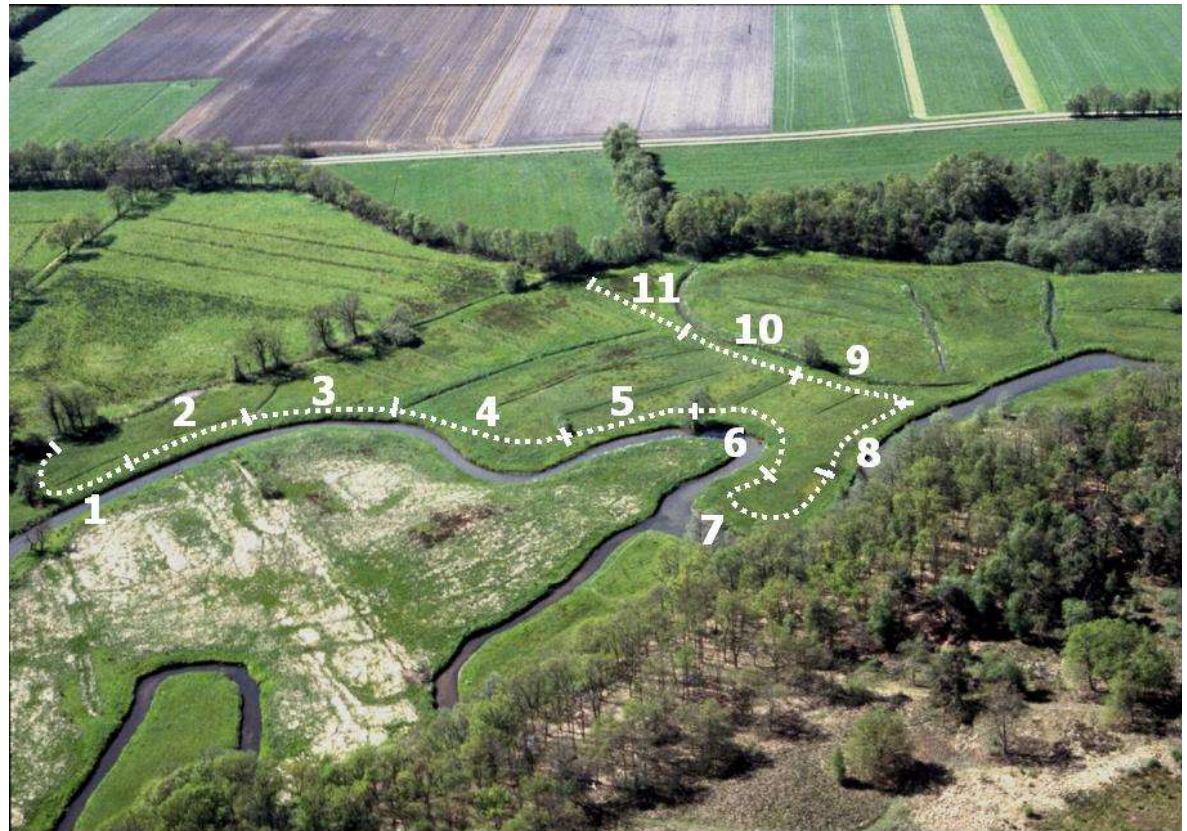
Population size

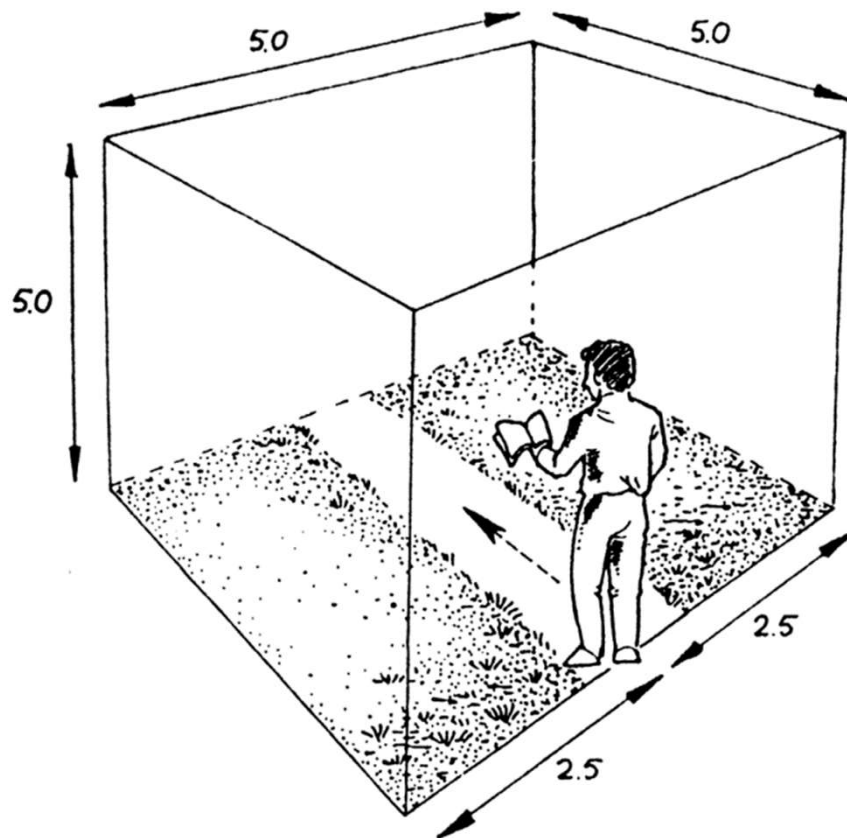
- Unit: 1x1 km (2019) or adults (2025)?
- As population trend != distribution trend, not a good idea to mix (as in 2019)
- For insects numbers can be huge
- Should be compared to Favourable Reference Values



Population trend

- The population size can be difficult, but for the trend we have sound methods
- Transect counts
- All data brought together in central database eBMS

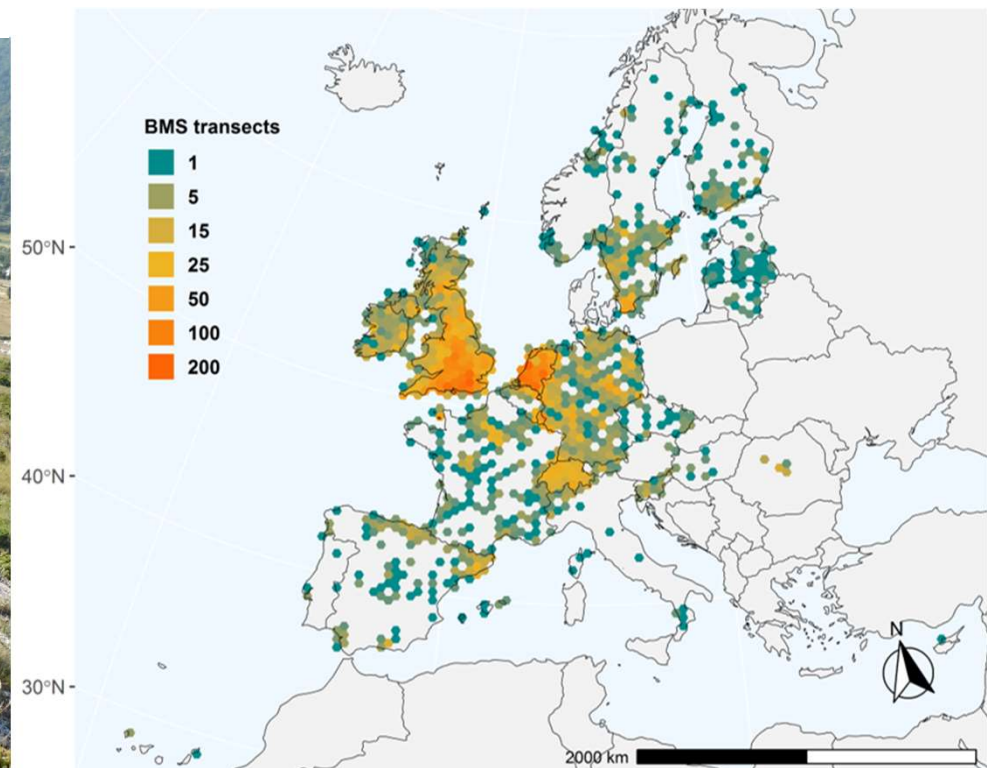


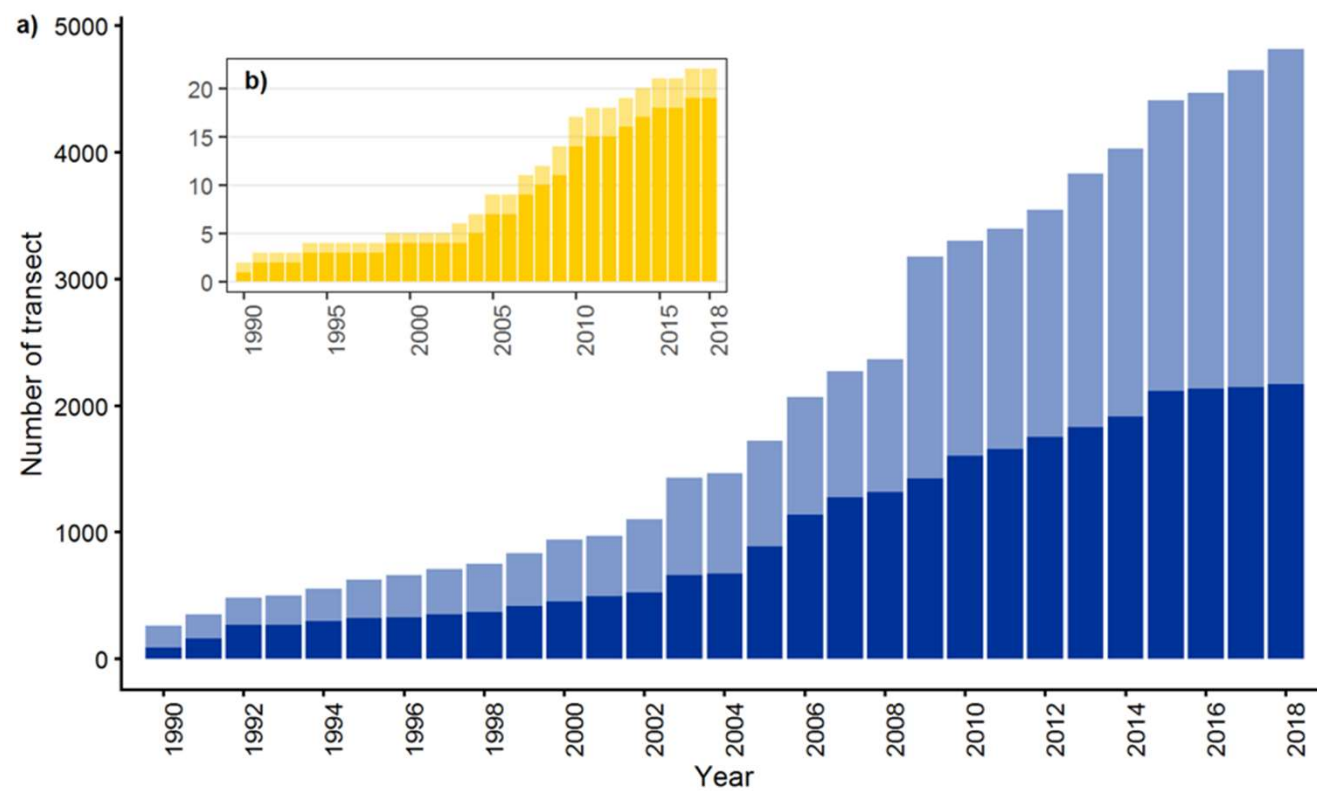


- Following strict protocol (e.g. weather)
- Almost all counted by expert volunteers
- Scientifically tested
- Everywhere in Europe the same
- Makes it possible to calculate reliable population trends

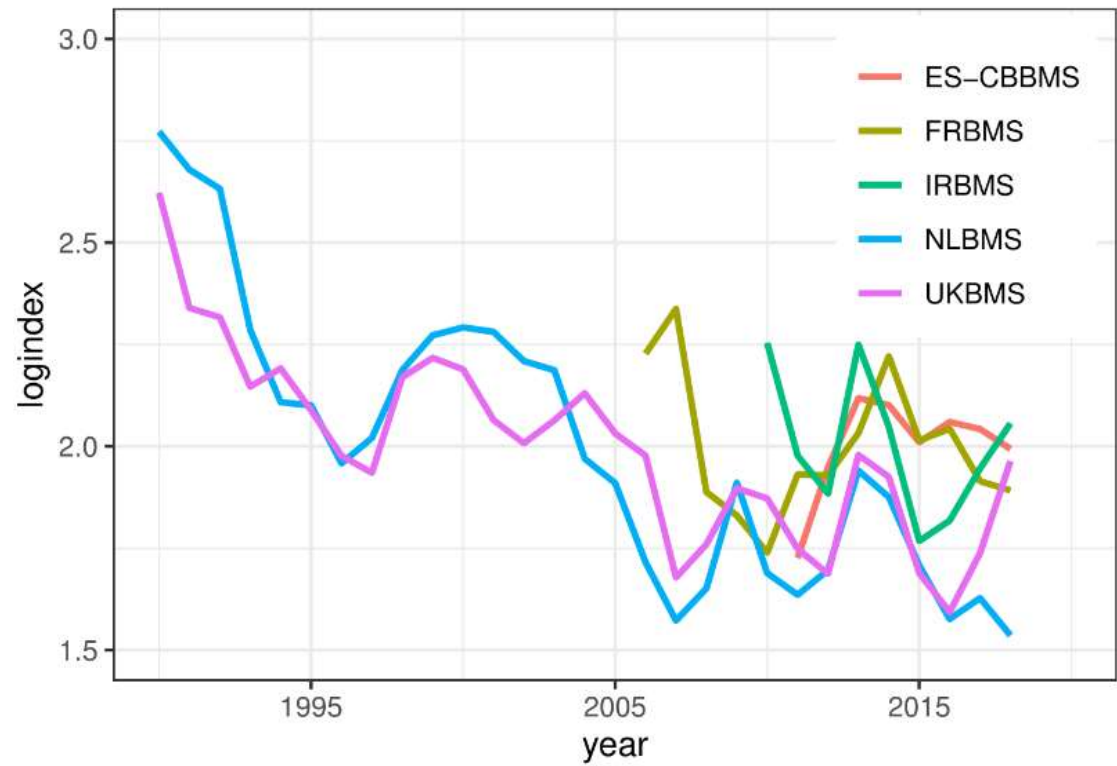


Population trend: butterfly transects





Wall (*Lasiommata megera*)



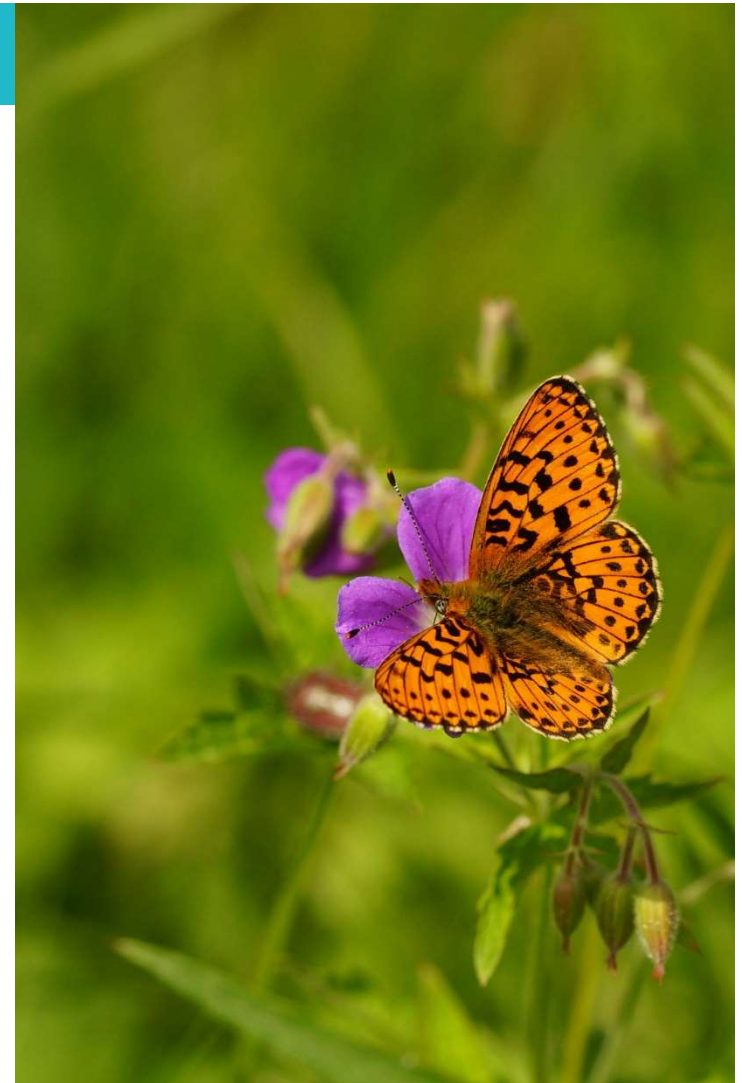
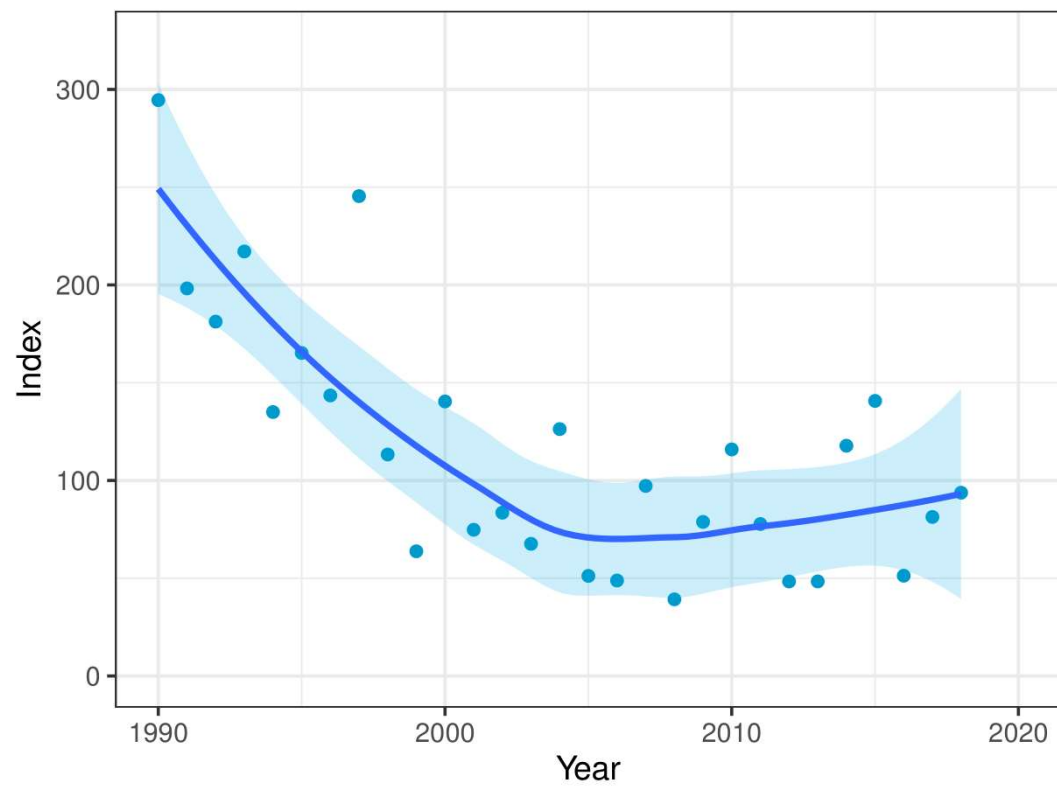
Butterfly population monitoring

- Method scientifically tested
- Can be done with volunteers and/or professionals
- Butterfly monitoring now in almost all EU27 countries
- Database, website and app ready and available, so joining is easy
- However monitoring is a long term commitment:
(paid) national/regional contactpersons vital for long term
- www.butterfly-monitoring.net



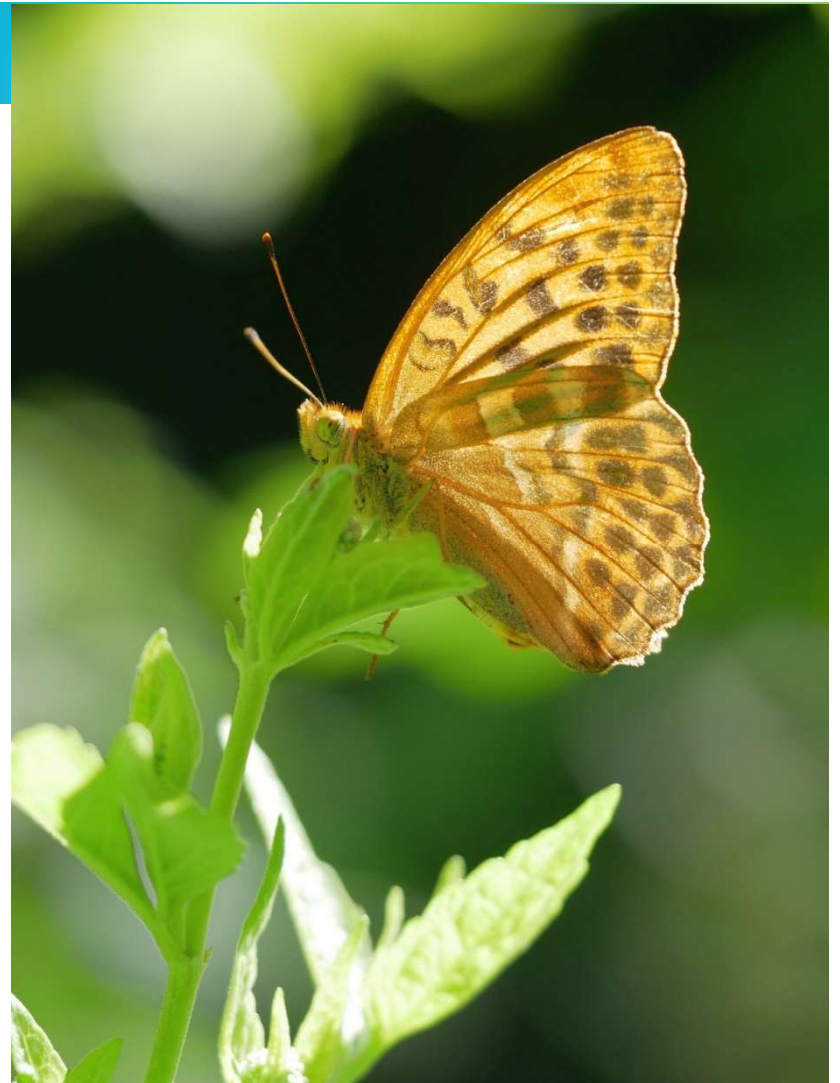
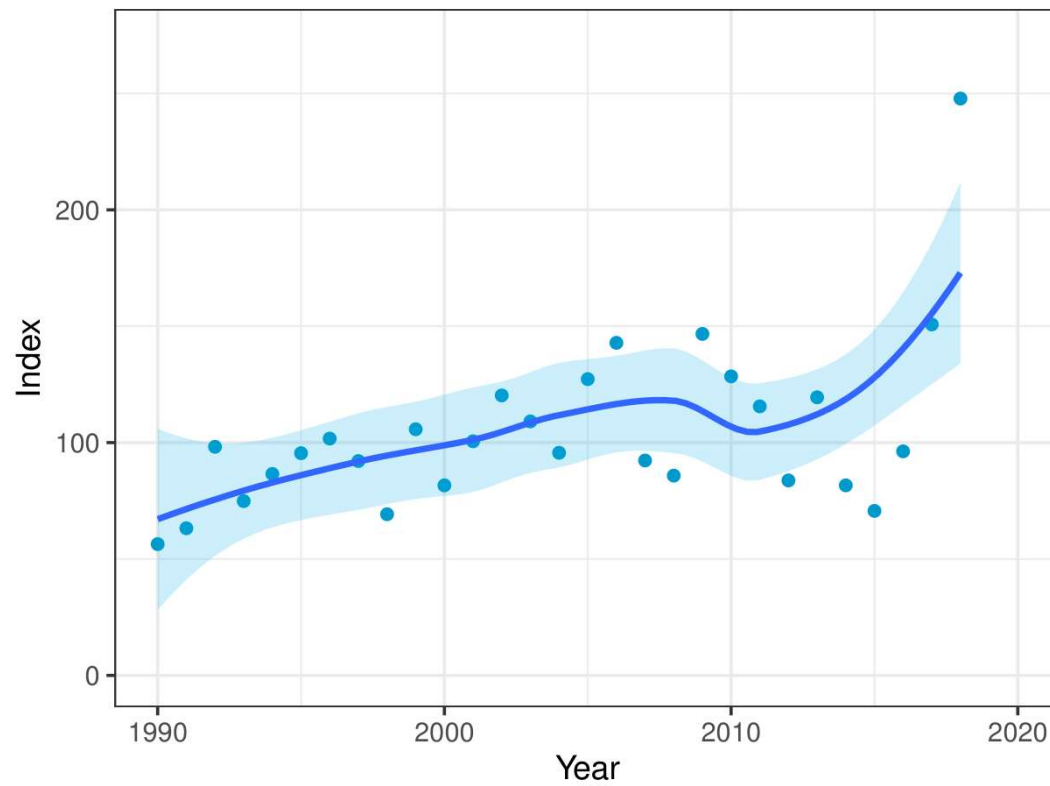
Species trends

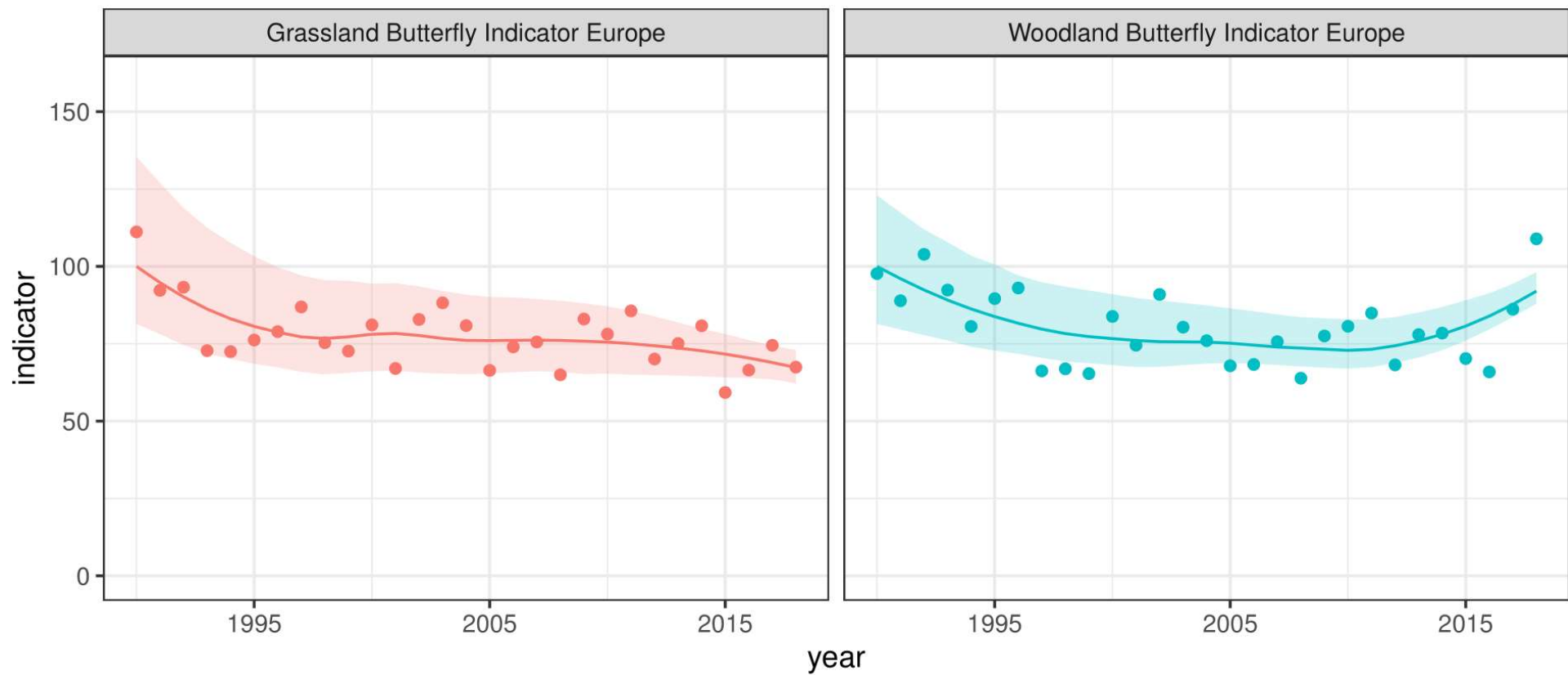
Boloria euphrosyne



Species increasing

Argynnis paphia

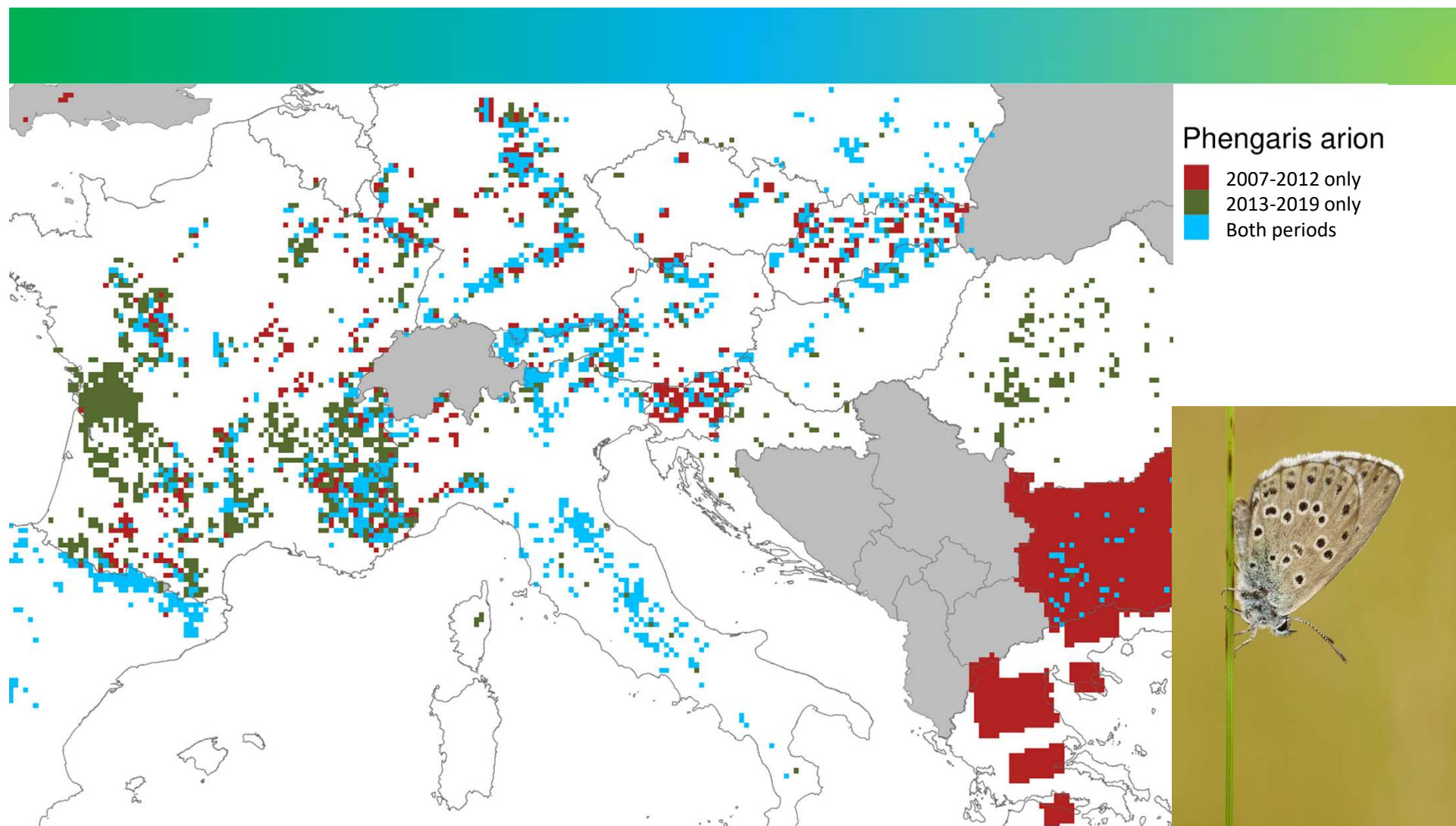




Distribution

- Stimulate citizen science
- Use open data when available (easiest via GBIF.org)
- Make data open via GBIF.org
- Realise professional inventories might only show you declines
- Species trends can be combined to indicators on a regional, national and EU level

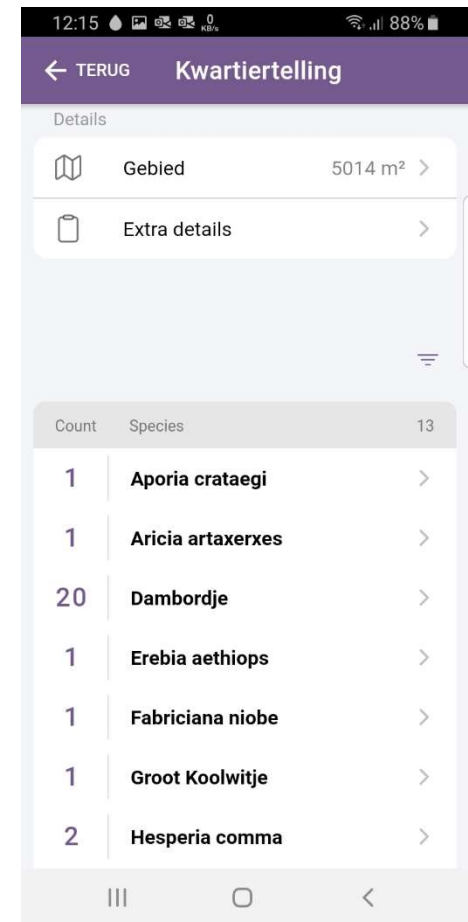




Monitoring 'light': 15 minute counts

- You know who counted where and when
- Distinguish zeroes from 'missing values'
- Both professionally as via citizen science
- Often with 'expert volunteers'
- Can be done everywhere, from a transect to a stationary garden count
- App and website available





[Butterfly Monitoring](#)[eBMS background](#)[My scheme](#)[My Data](#)[eBMS data](#)[Scheme admin](#)[Mijn account](#)[My Data](#) / [My samples](#) / [Sample details](#)

Sample details

[Weergeven](#)[Vertalen](#)

Sample details

Survey	EBMS 15 minute counts
Recorder	van Swaay, Chris
Datum	15/08/2021
Grid ref	44.6938935_6.3137577
Uncertainty (m)	4
Submission date	Entered on 15th August 2021 at 12:13
Location accuracy	4
Altitude	1920
Altitude accuracy	7
Application version	1.14.0
Data Source	android
Start Time	10:27
End Time	10:50
Temp (Deg C)	18
Wind Direction	SW
Wind Speed	1. Slight smoke drift

Occurrences

16 species seen

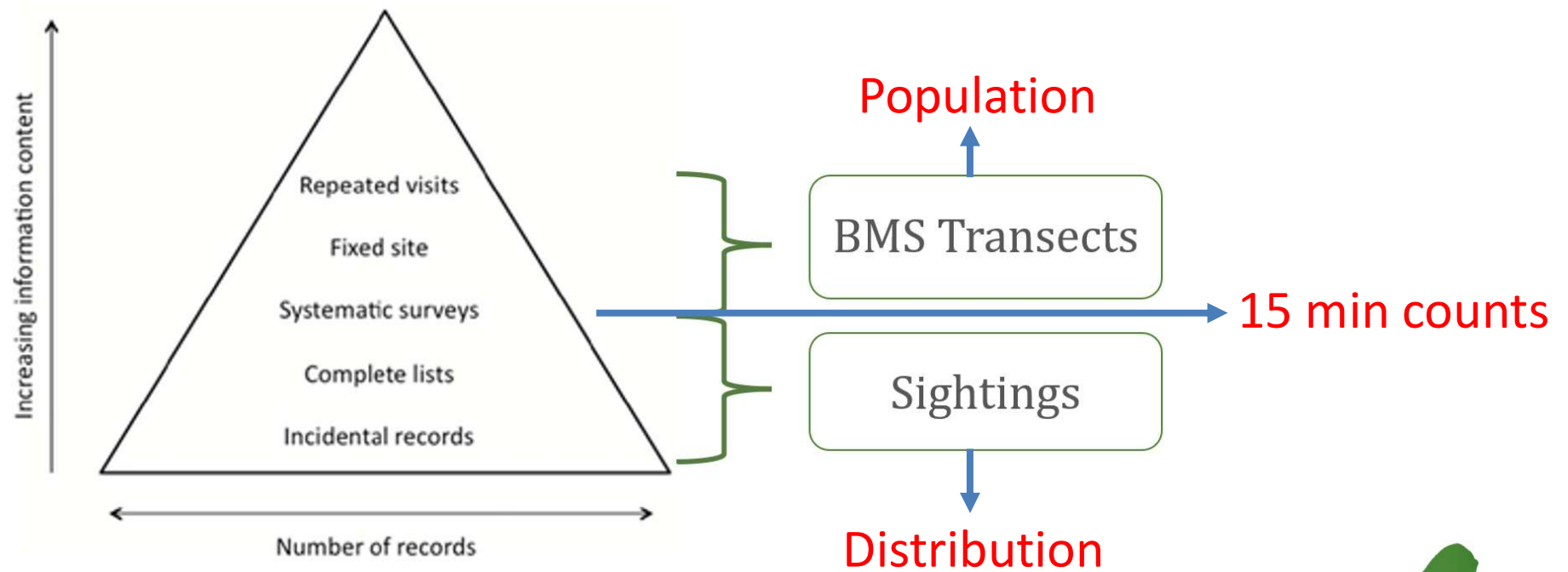
- 3 *Aricia artaxerxes* (Northern Brown Argus)
- 1 *Boloria titania* (Titania's Fritillary)
- 3 *Brintesia circe* (Great Banded Grayling)
- 5 *Chazara briseis* (The Hermit)
- 2 *Coenonympha pamphilus* (Small Heath)
- 1 *Colias alfacariensis* (Berger's Clouded Yellow)
- 1 *Issoria lathonia* (Queen of Spain Fritillary)
- 13 *Lysandra coridon* (Chalkhill Blue)
- 7 *Melanargia galathea* (Marbled White)
- 1 *Melitaea phoebe* (Knapweed Fritillary)
- 1 *Papilio machaon* (Swallowtail)
- 6 *Polyommatus damon* (Damon Blue)
- 1 *Pyrgus*
- 2 *Satyrus ferula* (Great Sooty Satyr)
- 2 *Speyeria aglaja* (Dark Green Fritillary)
- 10 *Thymelicus lineola* (Essex Skipper)

Landkaart



Sample photos and media



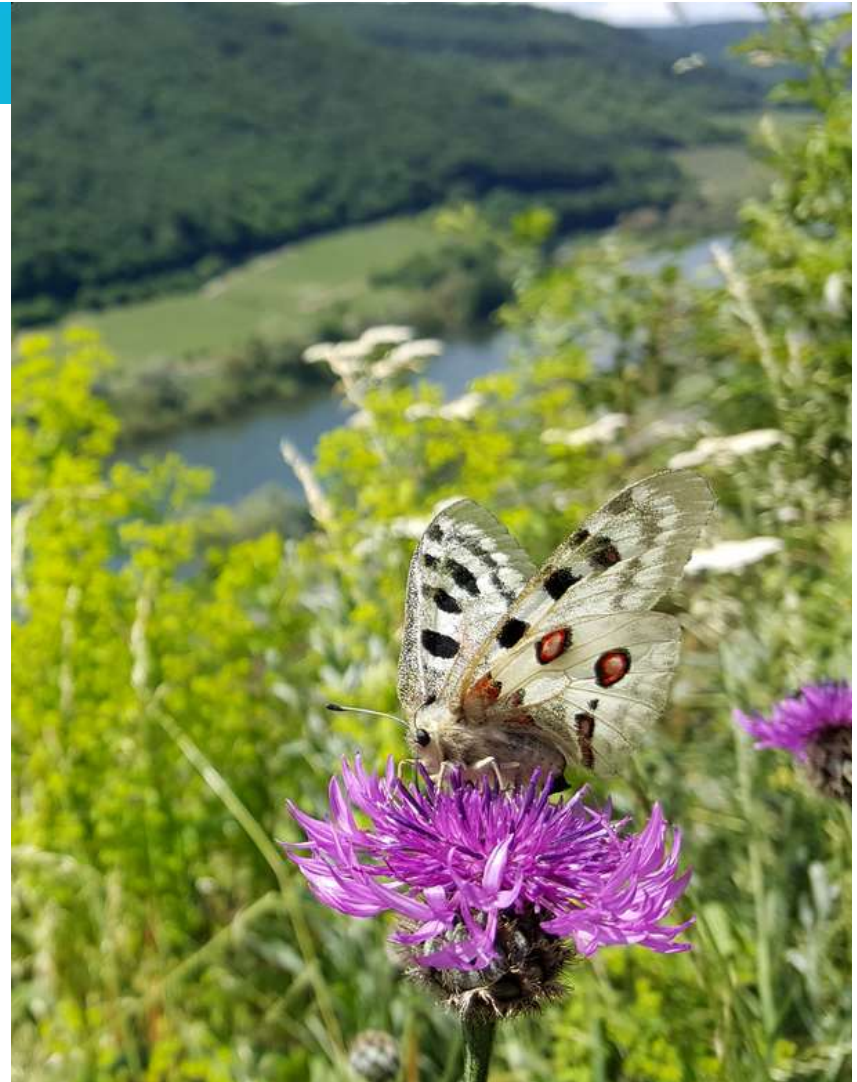


Isaac & Pocock (2015) Bias and information in biological records *BJLS*, 115, 3: 522–531 doi.org/10.1111/bij.12532



Policy makers

- Get national/regional coordinators
- Focus on citizen science
- Work with BCE partners
- Join Butterfly Monitoring easily via eBMS (website/database/app available)
- www.butterfly-monitoring.net
- Use and produce open data



www.ecologic.eu/book/improving-the-availability-of-data-and-information

- Much more info available in www.ecologic.eu/book/improving-the-availability-of-data-and-information
- Or www.ecologic.eu/sites/default/files/publication/2021/A_EBind_Handbook.pdf



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