

Expanding Monitoring of Butterflies for Restoration And Conservation across Europe 2021-2026 (EMBRACE)



Chris van Swaay

De Vlinderstichting / Dutch Butterfly Conservation

Butterfly Conservation Europe (BCE)

Centre for Ecology and Hydrology (UKCEH)

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UK Centre for
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eBMS



Butterfly
Conservation



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EMBRACE: all about Butterfly Monitoring



ENTOMOLOGIST'S GAZETTE, Vol. 26

79

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

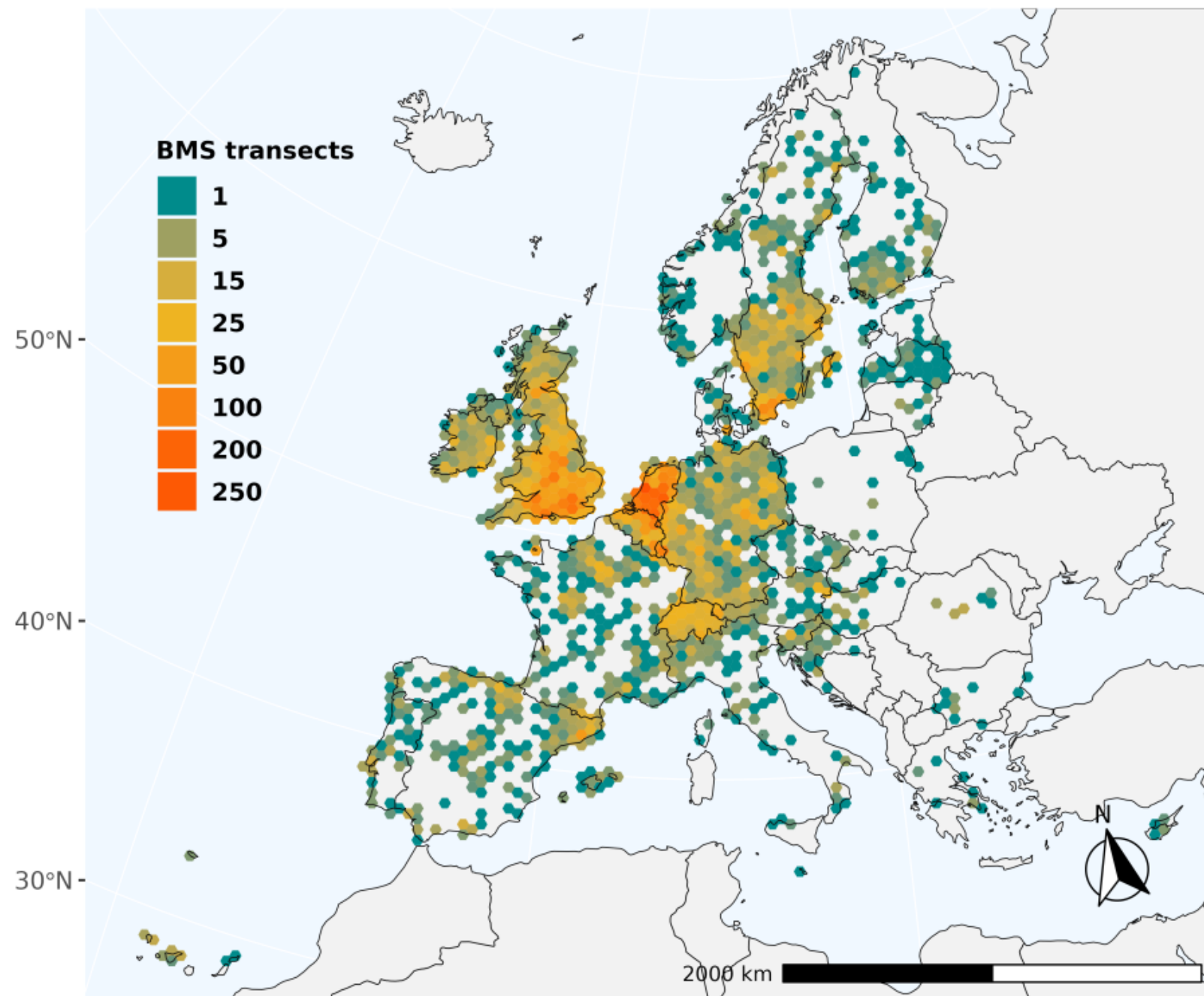
EMBRACE: all about Butterfly Monitoring



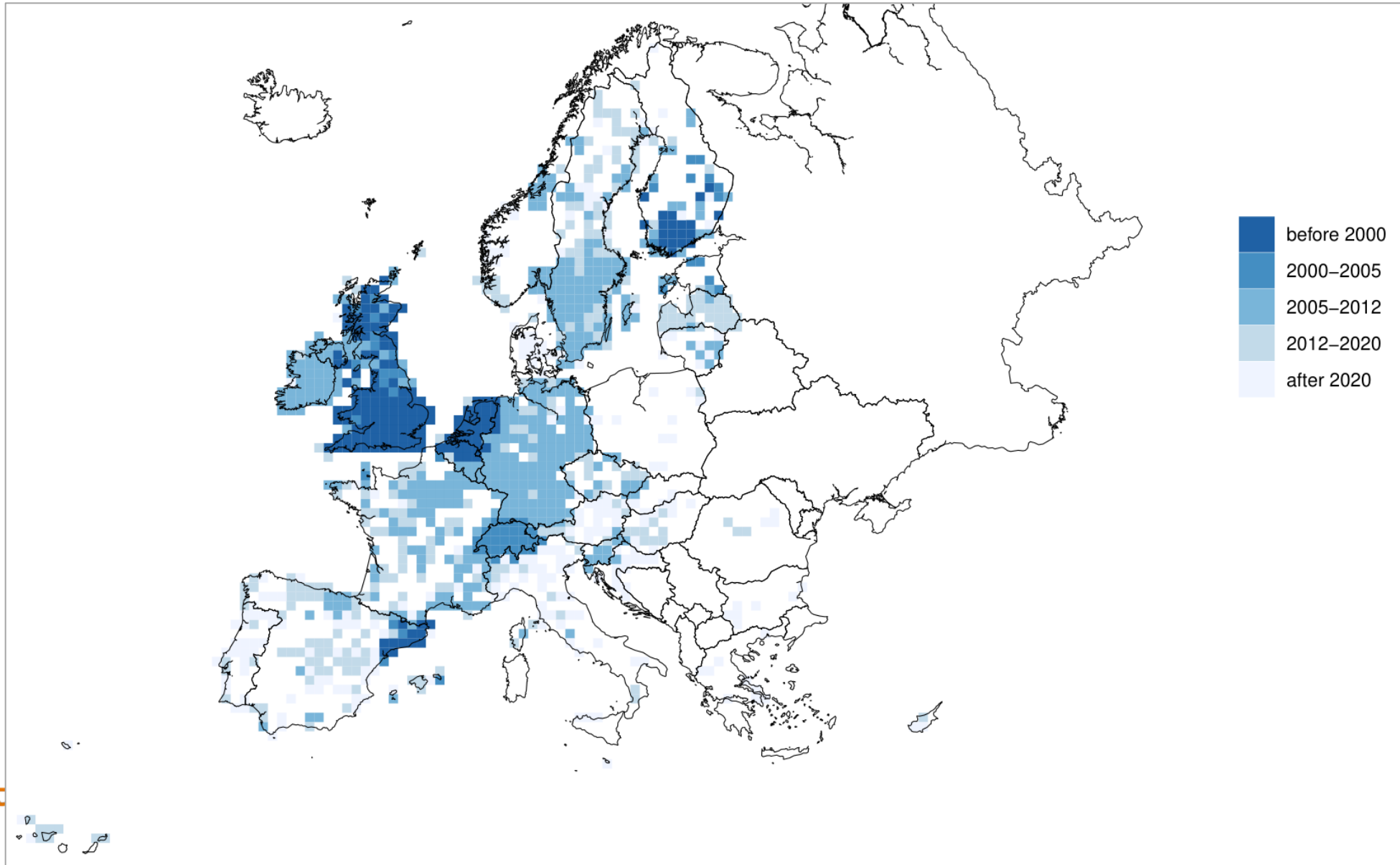
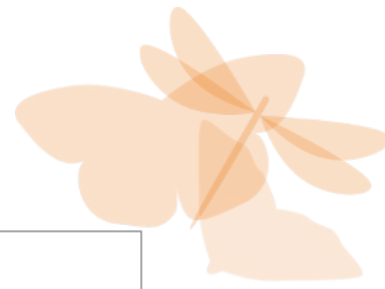
Butterfly monitoring:

- Since 1973 (UKBMS started 1976)
- Repeated transect-counts of butterflies to species level following protocol
- Mainly by expert-volunteers (citizen science)
- Many sites, number still growing
- Scalable: local/regional/national/continental
- Golden standard: many scientific publications





First year with butterfly monitoring



National Butterfly Monitoring co-ordinators

- Collect the counts
- Validate the counts
- Can calculate national trends and indicators
- Lead data to eBMS: central database



EMBRACE Tasks

Task 1: Calculation of the GBI in the EU for 1991-2023/2024/2025, based on data existing at national level

Task 2: Continuation of eBMS with butterfly field data collection in 2025 and 2026 to underpin the calculation of the GBI for 2025 and in the future, the GBI for 2026



EMBRACE



- Grassland Butterfly Index (GBI) on European/EU level
- Support BMS co-ordinators (we had a workshop on 2 April)
- Extend eBMS network
- Capacity building





European Grassland Butterfly Index GBI

- Oldest butterfly indicator: since 2005
- 17 characteristic grassland butterflies
- Both specialist and widespread species

Pollinator monitoring and the GBI

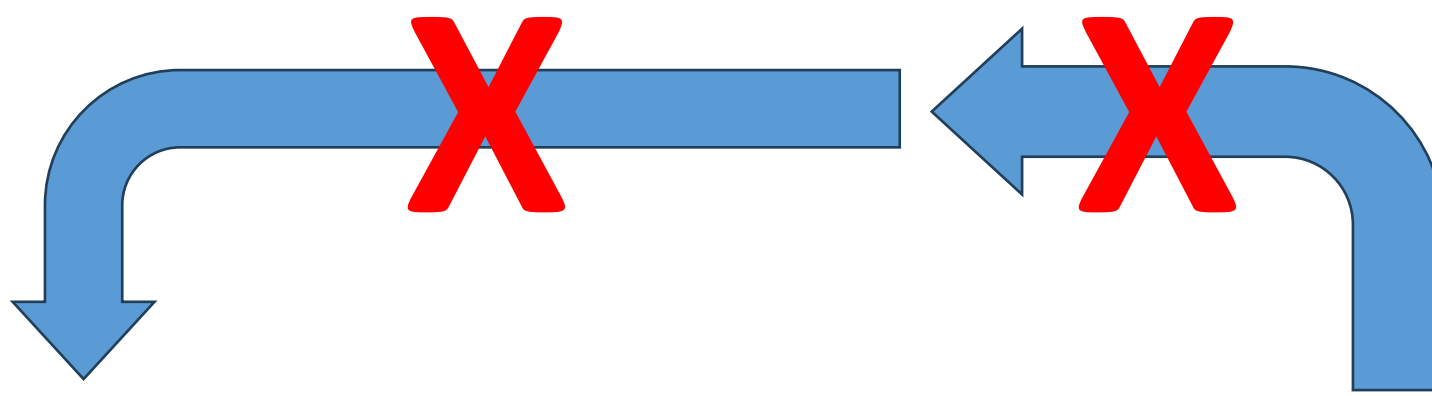


- Article 10 NRR: Restoration of pollinator populations
- Member States shall, ..., improve pollinator diversity and reverse the decline of pollinator populations at the latest by 2030 and thereafter achieve an increasing trend of pollinator populations, measured at least every six years from 2030, ...
- Pollinators: butterflies, moths, bees, hoverflies
- So MS have to take measures for butterflies and moths

Pollinator monitoring and the GBI

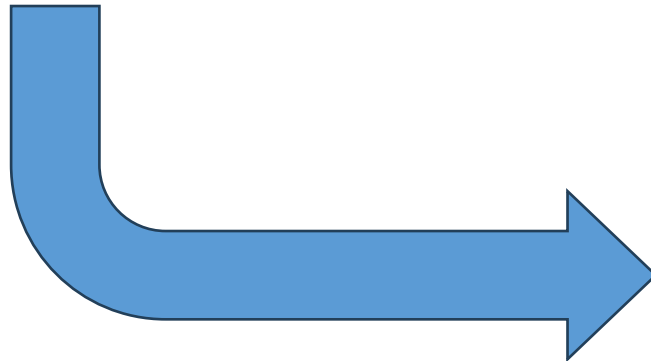


- So MS have to take measures for butterflies and moths
- They have to present them in a Nature Restoration Plan (Sep 2026)
- Butterflies and moths will profit → GBI will profit
- Pollinators have to be monitored
- Butterflies, bees and hoverflies via same (!) transects
- Moths via two traps on the transects
- All on same sites chosen by random stratified sampling



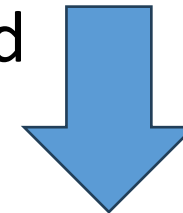
Pollinator monitoring

- Random stratified locations
- Once a month
- Trends mainly for widespread species



eBMS Butterfly Monitoring

- Location choice free
- Usually better butterfly sites
- Weekly/two weekly
- Trends for all species, including rare, threatened, HD, Red List
- Pollinator monitoring transects can be integrated



GBI

Why your MS should choose the GBI?



- Article 11 of the NRR
- “Member States shall put in place measures which shall aim to achieve an increasing trend at national level of **at least two out of the three** following indicators for agricultural ecosystems ...”:
 - grassland butterfly index (GBI)
 - stock of organic carbon in cropland mineral soils
 - share of agricultural land with high-diversity landscape features

Why your MS should choose the GBI?



- Measures for Pollinator recovery will also work for the GBI
- Pollinators = butterflies, moths, bees and hoverflies
- “Member States shall promote citizen science in the collection of monitoring data where suitable and provide adequate resources for the performance of those tasks” (NRR)
- Choosing the GBI as indicator is cost-effective (measures for art. 10 will partly overlap and monitoring can profit)

What can you do?



- Contact your MS
- Show them what is possible and how you can help
- Offer to help in Nature Restoration Plan
- Review the Nature Restoration Plan
- Communicate to recorders how important their counts are
- Learn how to produce trends and the national GBI

EMBRACE - timeline



- 🕒 • Support national BMS's
- ✅ • April 2025: Workshop for BMS co-ordinators
- ✅ • May 2025: GBI for EU/Europe up to 2023
- 🕒 • Capacity building
- 🕒 • Support in building national GBI's
- ➔ • December 2025: GBI for EU/Europe up to 2024
- ➔ • December 2026: GBI for EU/Europe up to 2025



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