

Nature Restoration Regulation (NRR) GBI and EUPoMS



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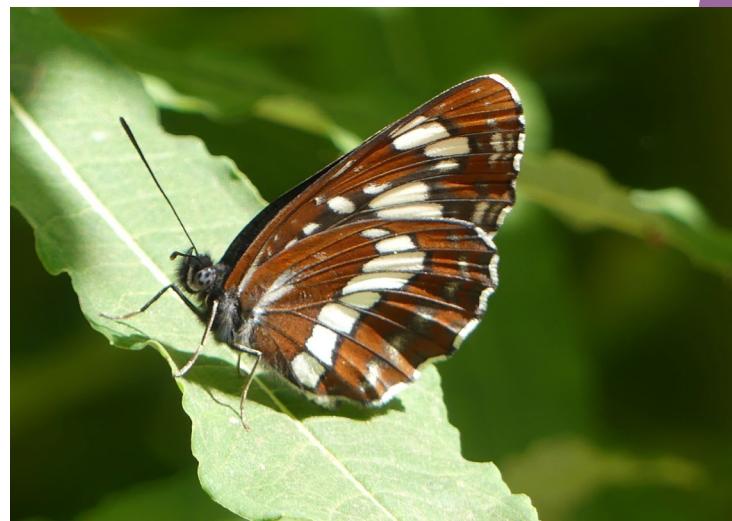
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The NRR and pollinator monitoring

- ▶ The NRR aims to restore European ecosystems with long term targets for 2030, 2040 and 2050
- ▶ The NRR has a wide scope: nature reserves; agricultural land; forests; urban; freshwater and marine ecosystems
- ▶ So, remember....
- ▶ Pollinators is only a small part of the NRR
- ▶ Monitoring is only a small part of the NRR
- ▶ But....
- ▶ Pollinator monitoring is an important part of NRR implementation, with short-term deadlines in 2026-27
- ▶ Pollinator monitoring is our area of expertise, so NRR implementation is likely to be an important part of our activities for the next 2 years



Article 11. Restoration of agricultural ecosystems

- ▶ Member States (MS) have the option to use the Grassland Butterfly Index (GBI), calculated using data collected in existing national Butterfly Monitoring Schemes (BMS)
- ▶ We will discuss this in Session 4 later today and consider the consequences for MS support and funding of their BMS

Article 10. Restoration of pollinator populations

- ▶ The delegated act establishes a new EU Pollinator Monitoring Scheme (EUPoMS) for common species of bees, butterflies, hoverflies and moths. We will discuss EUPoMS after my presentation as part of Session 3 today
- ▶ The delegated act also requires monitoring of rare species of bees, butterflies, hoverflies and moths. We will discuss this in Session 8 tomorrow



Art. 11 Restoration of agricultural ecosystems

- ▶ Birds and Butterflies are the only taxa with biodiversity indicators specified in the NRR
- ▶ For birds, the NRR is clear and simple. Every MS must measure their national Common Farmland Bird Index, with targets to increase the index by 2030, 2040 and 2050
- ▶ For butterflies, the situation is more complicated. MS must achieve an increasing trend in at least 2 of the 3 indicators:
 - (a) grassland butterfly index (GBI);
 - (b) stock of organic carbon in cropland mineral soils;
 - (c) agricultural land with high-diversity landscape features



Alauda arvensis Eurasian
Skylark © RSPB Images



Art. 11 and GBI timetable

- ▶ Q1 2026? MS will decide which 2 out of 3 indicators they want to use and include in their draft Nature Restoration Plan (NRP)
- ▶ Q2 2026? MS will consult on their draft NRP
- ▶ **1 September 2026**, MS must send their draft NRP to the Commission containing a description of the indicators they intend to use (maximum 3000 words)
- ▶ March 2027, Commission has 6 months to assess the draft plan and return it to MS with comments
- ▶ September 2027, MS have 6 months to finalise and then publish their final NRP



Encouraging MS to use the GBI in Art.11

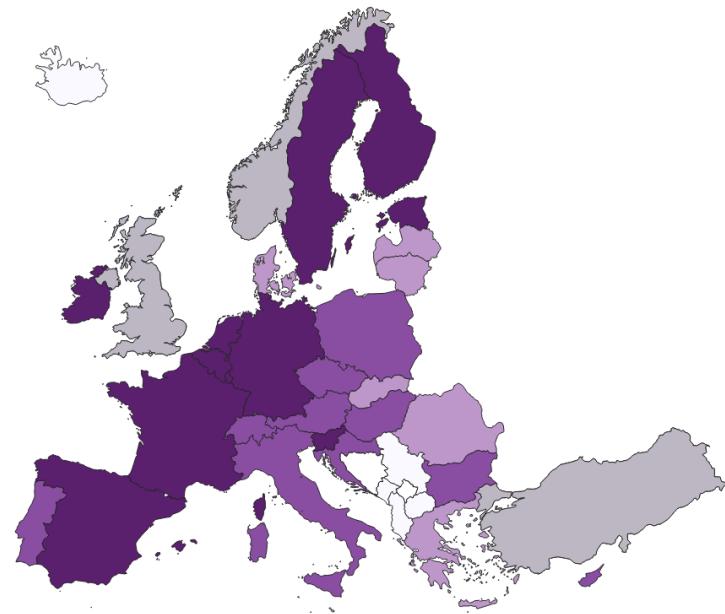
- ▶ As part of the EMBRACE project, BCE and the Commission have delivered 2 on-line webinars to explain the GBI to MS
 - In March 2025 with 30 participants
 - In October 2025 with 80 participants
- ▶ In November 2025 BCE updated a guidance document *“The benefits and cost-effectiveness of Butterfly Monitoring Schemes”* which has been sent to all eBMS Coordinators
- ▶ As part of the EMBRACE project, BCE has offered to have **bilateral meetings** with MS to discuss them supporting their BMS. No meetings have happened so far
- ▶ *What more can we do to persuade MS to use the GBI as an Art.11 indicator?* We will discuss this in Session 4 later today



Article 11 and BMS funding

- ▶ In 2018, there were BMS in 11 EU Member States: BE, DE, EE, ES, FI, FR, IR, LU, NL, SI, and SE. About 8 of these schemes were actively funded and supported by their MS. **There has been no increase in MS funding since 2018**
- ▶ Since 2018, the EU funded ABLE and SPRING projects have enabled BCE and partners to establish new BMS in the remaining 16 EU Member States: AT, BG, CY, CZ, DK, EL, HU, HR, IT, LV, LT, MT, PO, PT, SK and RO. **None are being funded or supported by their MS**
- ▶ NRR Art. 10(4) says “*Member states shall promote citizen science in the collection of monitoring data ... and provide adequate resources...*”
- ▶ *How do we encourage MS to fund their BMS if they decide to use, or not to use, the GBI as an indicator?*
We will discuss this in Session 4 later today

eBMS Status 2024

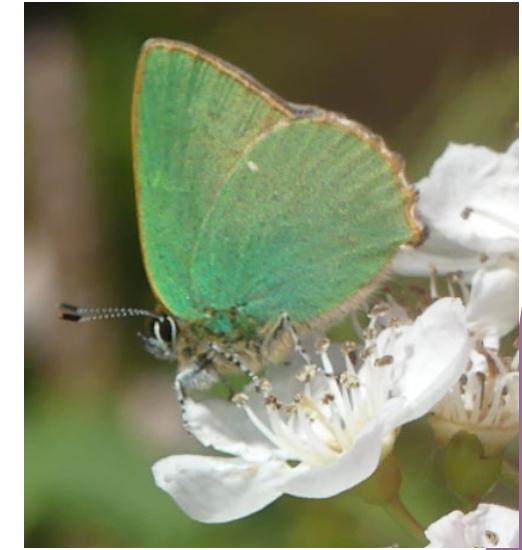


-  Established pre-2018
-  ABLE project 2018-20
-  SPRING project 2021-23

EUPoMS and BMS - key issues and differences

- ▶ EUPoMS and BMS both involve butterfly monitoring using transects but they are very different schemes...

EUPoMS	BMS
Legal duty for Member States	Run by volunteers and NGOs
Bees, butterflies, hoverflies and moths	Butterflies only
Monitoring will start in Spring 2027 on all sites and all 4 taxa	Schemes have grown gradually with no targets or deadlines
Paid professional surveyors	Unpaid citizen scientists
Transects are selected at random*	Transects are chosen by the surveyor*



** Note: Data from BMS transects cannot be used as part of EUPoMS but EUPoMS data can be used in BMS*

EUPoMS - timeline of key events

- ▶ 2018-19. EU adopted the Pollinators Initiative and set up the STING advisory group of European pollinator experts
- ▶ 2021-23. The EU funded SPRING project tested monitoring methods for bees, hoverflies and moths
- ▶ August 2024. The NRR came into force with Article 10 covering EUPoMS
- ▶ July 2025. Public consultation on EUPoMS delegated act
- ▶ 26 November 2025. Delegated act published in EU Official Journal and comes into force 16 December 2025
- ▶ 16 December 2026. EUPoMS monitoring starts (in practice, it will start in Spring 2027)
- ▶ 2027-30. The first reporting period with 4 years of data
- ▶ 2031. Possible amendment of EUPoMS (this would require another delegated act)



EUPoMS - minimum number of sites

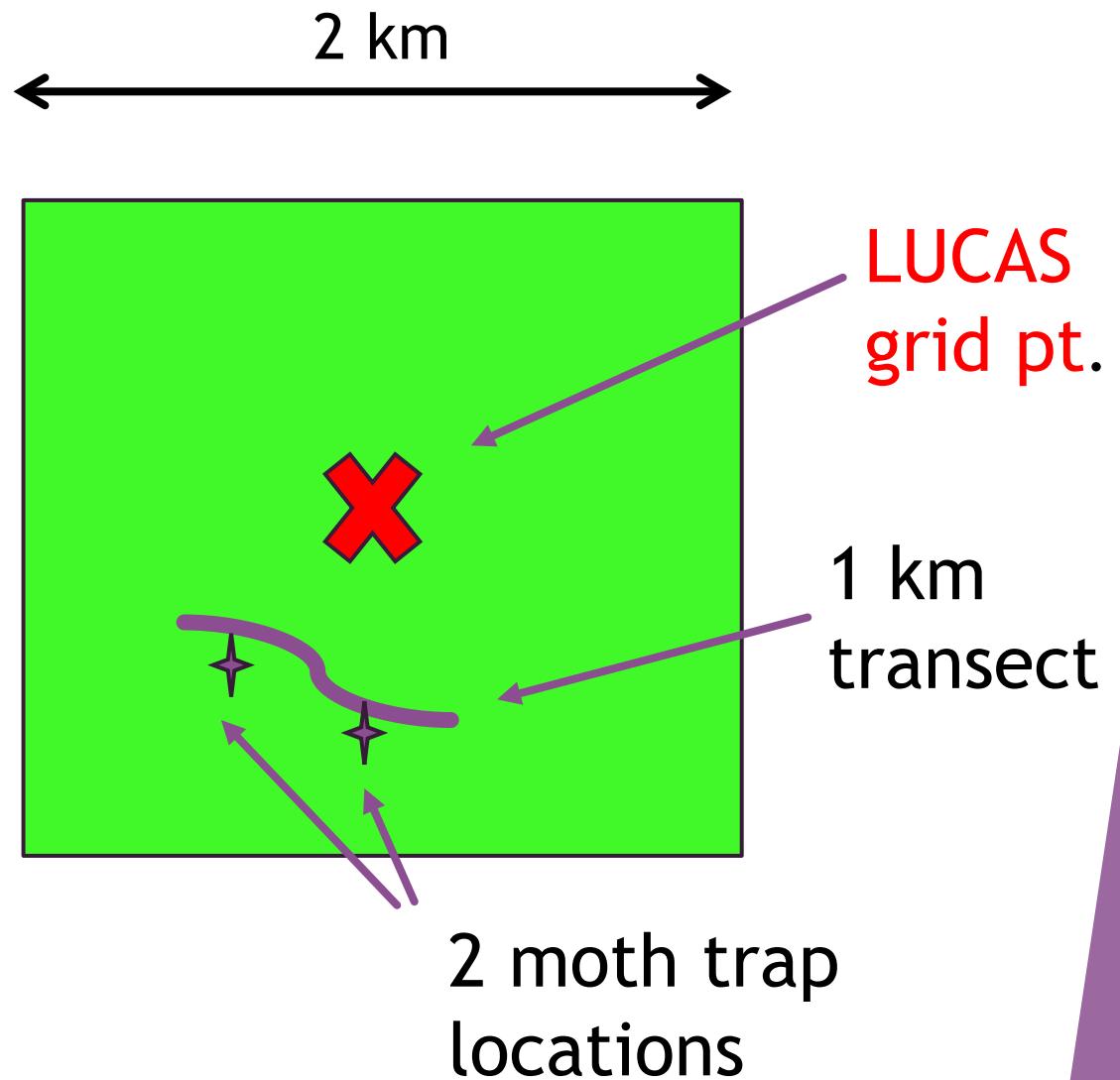
Member State	No. of sites
France	120
Italy, Spain	100
Germany	90
Bulgaria, Greece, Romania	80
Czechia, Croatia, Hungary, Poland, Portugal, Slovenia, Slovakia, Finland, Sweden	70
Belgium	60
Denmark, Estonia, Latvia, Lithuania, Netherlands,	50
Ireland, Cyprus, Luxembourg,	40
Malta	30
Total	1820



- ▶ 50 sites will be used as an example in this presentation

Site selection - stratified random sample

- ▶ Stratified sample by biogeographical region and ecosystem. (e.g. 40% agricultural and 60% forest area means 20 agricultural sites and 30 forest sites)
- ▶ Random selection of a LUCAS grid point
- ▶ Draw 2km x 2km square on LUCAS point
- ▶ Apply all the exclusion criteria e.g. more than 2km from a road
- ▶ Create a 1km long transect route inside the square
- ▶ Locate 2 moth traps on the transect
- ▶ Note: The Commission/EEA/JRC will assist Member States with site selection



Transect monitoring method

- ▶ Bees and hoverflies: Identify species by sight or capture in net, put into a sample bottle then identify in laboratory later
- ▶ Butterflies & day flying moths: Identify species by sight
- ▶ Night flying moths: 2 traps on transect, identify species using AI (macro moths only)
- ▶ Monitor once a month during flight season (e.g. for 6 months)
- ▶ Record weather conditions
- ▶ 60 minutes for each transect walk



EUPoMS - Member State costs (2024 prices)

- ▶ The European Parliament approved the NRR with an initial annual cost estimate of €17.7M - €18.9M
- ▶ Delegated act reduced cost estimate to €11.9M/year
- ▶ €11.9M to monitor 1820 transects is €6500/transect
- ▶ 50 sites will cost €325k/year
- ▶ The costs will cover:
 - Surveyor recruitment and training
 - Surveyor wages, equipment and travel expenses
 - Laboratory identification of bees and hoverflies
 - Validation and analysis of data
 - Management and administration



EUPoMS - implementation Issues for MS

- ▶ **Financial resources:** finding the money e.g. €325k/year
- ▶ **Human resources:** Developing taxonomic expertise
 - EU Red List of Taxonomists 2022. EU funded EPIC project - training and accreditation 2025-26/27
 - MS need to provide training and careers from 2026 onwards
- ▶ Improving AI for moth identification in S and E Europe
- ▶ Project Management to establish EUPoMS in 2026-28
- ▶ Good administration to run EUPoMS from 2026 onwards
- ▶ Set up an advisory group including pollinator experts
- ▶ **Data collection/storage:** part of the success of the ABLE and SPRING projects was having a single European butterfly database with Apps in MS languages. Should EUPoMS use same model?



BMS Coordinators role in EUPoMS?

- ▶ What role do you want to have?
 - Butterfly surveyor - *probably NO?*
 - Surveyor recruitment and training, validation of data, calculating trends, member of advisory group - possibly YES?
- ▶ Talk to your manager and colleagues. *What role do they want to have?*
- ▶ Talk to your national bee, hoverfly and moth experts. *What role do they want to have?*
- ▶ Talk to your Government Ministry and offer to help them
- ▶ But....
- ▶ Don't do any work for the Ministry unless they pay you



EUPoMS - draft MS project plan for 2026?

- ▶ **Jan-March.** Get full year budget (e.g. €325k), an administrator and 1 surveyor/taxa, set up advisory group, order equipment
- ▶ **Jan-March.** Select sites (stratified, random), exclude unsuitable sites, map transect routes - office-based exercise
- ▶ **April-May.** First site visit: 2 people, talk to landowner(s), find parking and access, walk transect route, record site data
- ▶ **June-August.** Monitor every site once or twice for one or two taxa, collect bee and hoverfly samples, record data. Aim to carry out 10-15% of a full year's monitoring
- ▶ **August-October.** Identify bee and hoverfly samples in laboratory, calculate resources needed, recruit all surveyors, order all equipment
- ▶ **November or December.** Hold a 2-3 day in-person meeting for everyone on EUPoMS team to agree a monitoring plan for 2027



Nature Restoration Regulation - Conclusions

- ▶ The NRR is a huge opportunity to reverse the decline of biodiversity including butterflies and moths
- ▶ **Article 11. Restoration of agricultural ecosystems**
 - ▶ Member States (MSs) have the option to use the Grassland Butterfly Index (GBI) as an indicator, using BMS data
 - ▶ We will discuss this in Session 4 later today and consider the consequences for MS support and funding
- ▶ **Article 10. Restoration of pollinator populations**
 - ▶ The new EUPoMS for common species of bees, butterflies, hoverflies and moths will start in 2027. We will discuss EUPoMS next
 - ▶ The delegated act also requires monitoring of rare species of bees, butterflies, hoverflies and moths. We will discuss this in Session 8 tomorrow

