The State of Europe's Wild Birds 2025

Pan European Common Bird Monitoring Scheme
PECBMS

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European Bird Census Council
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Compiled by

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About PECBMS

The Pan-European Common Bird Monitoring Scheme is a joint initiative of the European Bird Census Council (EBCC) and BirdLife International. Since its launch in 2002, the PECBMS project has been supported by the Royal Society for the Protection of Birds (RSPB, the BirdLife Partner in the UK).

The project has received financial support from the European Commission since January 2006.

Other important partners of the project are the Statistics Netherlands (CBS), the Czech Society for Ornithology (CSO, the BirdLife Partner in Czechia), the British Trust for Ornithology (BTO), the Dutch Centre for Field Ornithology (SOVON), the Catalan Ornithological Institute (ICO), and others.

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Online resources

PECBMS website – pecbms.info

Species Trends – pecbms.info/species-trends

Wild Bird Indices – pecbms.info/indicators

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Grey Wagtail by Štěpán Mikulka

Summary

The Pan-European Common Bird Monitoring Scheme (PECBMS) presents its 2025 data update. This document provides an overview of the methodological framework and analytical tools applied in 2025, together with explanatory notes and links to the principal PECBMS outputs, species indices, and multi-species indicators. All products are available for download from the PECBMS website (Data Provision and Co-Authorship Policies apply).

European population indices and long-term trends were computed for 170 species of wild birds. These species-level indices form the basis for the construction of the Wild Bird Indices – multi-species indicators representing farmland, forest, and all common bird species – at both the pan-European and EU scales, as well as for major biogeographical regions. The current results cover the period 1980–2024 and draw upon data submitted by 30 participating European countries. A detailed description of the methods used is available on the PECBMS website.

PECBMS gratefully acknowledges the coordinators of national breeding bird monitoring programmes and the extensive network of volunteer observers who collect the primary field data. A full list of contributors and partner organisations is provided in the Acknowledgements section at the end of this document.

What's new in the PECBMS 2025 update?

• This PDF article facilitating the citation process of PECBMS data is available for the first time. It summarises the whole accompanying information on the recent PECBMS data update, which is now compiled and available on the PECBMS website. The article includes links to the indices and indicators, as well as to all monitoring programs that deliver data to the PECBMS. The recommended citation of the PECBMS data, if used in a project, is at the very beginning of the article.

• All PECBMS contributing countries, except Germany, delivered their data up to and including 2024. Data from Germany up to 2023 were used for this update.

• The indices of some species have changed due to a combination of changes in several countries. Estonia, France and Hungary revised their data. The Czech Republic combined its old and new monitoring schemes for the first time. Finland and Spain also revised their datasets and, for the first time, used a combination of several monitoring schemes within each country. All these changes have influenced the European index of some species.

• PECBMS revised the Crested Lark (*Galerida cristata*) data, noting that early European trends were skewed by steep declines in several countries during the 1980s and 1990s. To better reflect actual population changes, the time series was truncated to start from 1998.

• The computation procedure, data quality control, and the presented indices, trends, and indicators are generally consistent with the 2024 update. Changes in national data justify the inconsistencies.

Data

Species indices and trends in Europe

In 2025, reliable European indices were produced for **170 species** – the same number as in the 2024 update.

The **source data** for calculating the European population indices and trends are the **national indices and trends** provided by coordinators of the national bird monitoring schemes participating in the PECBMS network.

National data for this update were provided by 30 countries: **Andorra**, **Austria**, **Belgium**, **Bulgaria**, **Croatia**, **Cyprus**, **Czechia**, **Denmark**, **Estonia**, **Finland**, **France**, **Germany**, **Greece**, **Hungary**, **Italy**, **Latvia**, **Lithuania**, **Luxembourg**, **the Netherlands**, **Norway**, **Poland**, **Portugal**, **the Republic of Ireland**, **Romania**, **Slovakia**, **Slovenia**, **Spain**, **Sweden**, **Switzerland**, **the United Kingdom**.

Data coverage periods differ between countries. A general overview of the monitoring periods by country is provided on the PECBMS website, in Methods, Chapter 2.3: Types of supranational results produced by PECBMS. However, within a single country, the length of available national data may vary by species. Therefore, for each species, we list the countries and the corresponding national data periods in the individual species graphs (accessible through the **List of countries** pop-up window at the PECBMS website).

Wild Bird Indices (multi-species indicators)

This update includes indicators for farmland, forest, and all birds at the **European level** and four European regions: **Western**, **Northern**, **Central & Eastern**, and **Southern Europe**. Indicators are also presented for the **EU** as a whole, and separately for **New** (Member States that joined the EU in 2004 or later) and **Old EU** Member States.

The **source data** for calculating the indicators are **supranational species indices** – regional, and, at a higher level, European or EU. These

supranational species indices are derived from national species indices.

At the European level, **all 30 PECBMS countries** are included in the indicators.

The EU-level indicators include the data from 26 EU Member states: **Austria**, **Belgium**, **Bulgaria**, **Croatia**, **Cyprus**, **Czechia**, **Denmark**, **Estonia**, **Finland**, **France**, **Germany**, **Greece**, **Hungary**, **Italy**, **Latvia**, **Lithuania**, **Luxembourg**, **the Netherlands**, **Poland**, **Portugal**, **the Republic of Ireland**, **Romania**, **Slovakia**, **Slovenia**, **Spain**, and **Sweden**.

The only remaining Member State not yet included is **Malta**. As a national bird survey is already underway in the country, Malta is expected to contribute its national data to the PECBMS in the near future.

Although PECBMS maintains European and EU indices for 170 species, **two endemic species** – Cyprus wheatear (*Oenanthe cypriaca*) and Cyprus warbler (*Curruca melanothorax*) – **are excluded from the indicators**, as they occur only in Cyprus. Therefore, the main indicators for the full PECBMS species dataset (**All Bird Index**) include **168 species**, regardless of their habitat classification. The number of species used in the **Farmland Bird Index (39 species)** and the **Forest Bird Index (34 species)** is not affected by the two endemics. The number of species used for the indicator calculation remains unchanged from the previous year.

To assign all PECBMS species to these main **habitat** types – **farmland**, **forest**, and **other** – we use the PECBMS **single European species habitat classification**. Detailed information, including the species list and their habitat classifications, is available on the PECBMS website, in the Methods section, Chapter 3, Box: Species selection and classification.

Methods

Species indices and trends in Europe

European species trends and indices are calculated from national population indices and trends provided by coordinators of the national bird monitoring schemes participating in the PECBMS network.

A standard procedure consists of several steps.

National coordinators calculate **national trends and indices** from field data collected by skilled volunteer counters in accordance with standard protocols. Since field counting methods vary by country, national coordinators analyse species trends using **RTRIM-shell**, an R-based version of the TRIM tool (Trends and Indices for Monitoring data), developed by Statistics Netherlands specifically for monitoring datasets. This tool adjusts for field-methodological differences, ensuring standardised, comparable bird indices and trends across Europe. It uses a tailor-made implementation of loglinear regression models (RTRIM models) from time series of recorded species counts at the study plots. The main advantages of RTRIM models are that they account for both site and year effects, and they can estimate missing values (counts for sites that were not counted in particular years) based on trends from other monitored sites.

More information can be found on the PECBMS website, Methods, Chapter 1: National species indices and trends,

National trends and indices are aggregated into **supranational species trends and indices** (e.g., regional, European, and EU) by the PECBMS coordination unit. The RSWAN tool is commonly used for this purpose. Its advantage is stepwise completion of countries into regions and then to the European or EU level. Countries produce their national indices over uneven time periods. Therefore, imputing missing years for countries with shorter datasets is required during the supranational index calculation in RSWAN. European and EU indices are calculated

by grouping the countries into regions with similar natural conditions, agriculture, and history (a stepwise procedure). This hierarchical process first enables estimation of missing years for countries using comparable data from neighbouring countries within a region, and subsequently calculates regional indices as realistically as possible. Imputation is used for all missing years in the dataset. This procedure is analogous to the estimation of missing values in the bird surveys when calculating national indices in the RTRIM-shell. The overview of the grouping of countries in the stepwise procedure for Europe and the EU is given in the PECBMS computation schedule. However, for each species, only the countries that provided high-quality data for that species are included in the calculation (the list of countries is presented in the species' graph via the pop-up window titled List of countries).

To account for the fact that different countries/regions hold different proportions of European population for each species, we **weigh the national/regional population indices** by national/regional population size estimates published in the European Red List of Birds (ERLoB 2021), complemented when necessary with regional (sub-national) population sizes provided by the national coordinators.

Further details on the production of the supranational indices are available on the PECBMS website, in Methods, Chapter 2: Supranational species indices and trends.

The procedure includes an extensive data quality check, implemented at each stage of data collation and analysis. First, the national coordinators review the national-level data (species counts, indices, and trends) for calculation errors and weak and suspicious data. The PECBMS coordinator rechecks the national data, with particular attention to the consistency of indices with the previous dataset update. After supranational indices and trends are produced, their consistency is assessed as was done for national data. If the PECBMS coordinators identify inconsistencies, they examine them in detail to determine whether they arise from the dataset being enlarged or improved, or from a computation error.

Wild Bird Indices (multi-species indicators)

The PECBMS computes the indicators using the **MSI-tool** (R-script) for calculating Multi-Species Indicators (MSI) and trends following Soldaat et al. (2017). European, EU, and regional species indices, including their standard errors, serve as source data for the respective indicators. The calculation of multi-species indicators is based on a Monte Carlo simulation of annual species indices and their standard errors. The method also incorporates chaining, which enables handling of uneven time series (since the index for some species included in the indicator began later than others).

The tool produces both **unsmoothed** and **smoothed** indicator values with **confidence intervals**. These smoothed indicators are presented as the official PECBMS outputs.

Further details on the production of the indicators are provided in Methods, Chapter 3: Multispecies indicators.

Results

Species indices and trends in Europe

We present indices, long-term and ten-year trends, and slopes for 170 European breeding species on the PECBMS website via an interactive table Species Trends. The table summarises the updated long-term and ten-year trends and slopes for European species, along with each species' habitat classification.

The **Long-term Slope** is calculated over the longest available period for each species index; the starting year ranges from 1980 to 2006 (as indicated by superscripts next to the species name in the table). Correspondingly, the **Long-term Trend** represents the percentage change in the smoothed index value between the first

and last year of this period. Smoothing is used to avoid abrupt shifts in the Trend between updates caused by natural year-to-year fluctuations in the species index.

The **Ten-year Slope** is calculated over the most recent ten-year period, 2015–2024. Likewise, the **Ten-year Trend** shows the percentage change in the smoothed index value between the first and last year of this period.

The **graphs of European species indices** also display the Trend classification for the long-term slope, together with a list of countries that contribute data to each European species index.

All species are assigned to one of the main **habitat** types – **farmland**, **forest**, or **other**. This classification is based on the PECBMS **single European species habitat classification** adopted at the 2005 PECBMS workshop in Prague. Detailed information, including the species list and their habitat classification, can be found in the Methods section, Chapter 3, Box: Species selection and classification.

Wild Bird Indices (multi-species indicators)

The set of European, EU, and regional smoothed indicators for the 2025 is available on the PECBMS website through interactive tables European Indicators. The tables summarise the time span of the indicators, the number of species included, and the indicator **Trend**, which describes the percentage change between the first and last year of the smoothed indicator values.

The **indicator graphs** show the smoothed indicators together with their lower and upper confidence intervals, as well as the unsmoothed indicator for the period beginning in 1980.

The **list of species**, their **trends**, and the **list of countries** are shown alongside each indicator graph. The graph also shows the number of species included in each indicator that are declining (moderately or steeply), increasing (moderately or strongly), stable, or uncertain.

Download

All the PECBMS results presented at the 2025 update are freely available for download as Excel files (the PECBMS Data Provision and Co-Authorship Policies apply):

European bird species indices and trends

Wild Bird Indices for Europe and the EU

Whenever you use the data, we kindly ask that you acknowledge the data source as **EBCC/BirdLife/RSPB/CSO**.

Recommended citation:
PECBMS 2025. The State of Europe's Wild Birds 2025. CSO, Prague, Czech Republic.

Following each update, we also upload the latest PECBMS Indices and Trends to the Zenodo repository, supplementing the data paper by Brlík, V. et al., published in 2021.

Note: We recommend interpreting year-to-year changes in index values with caution. Readers should pay attention to the species legend. We strongly advise consulting the PECBMS coordinator, Eva Šilarová (*silarova@birdlife.cz*), before using the results presented in this report.

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