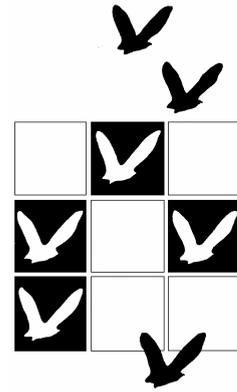
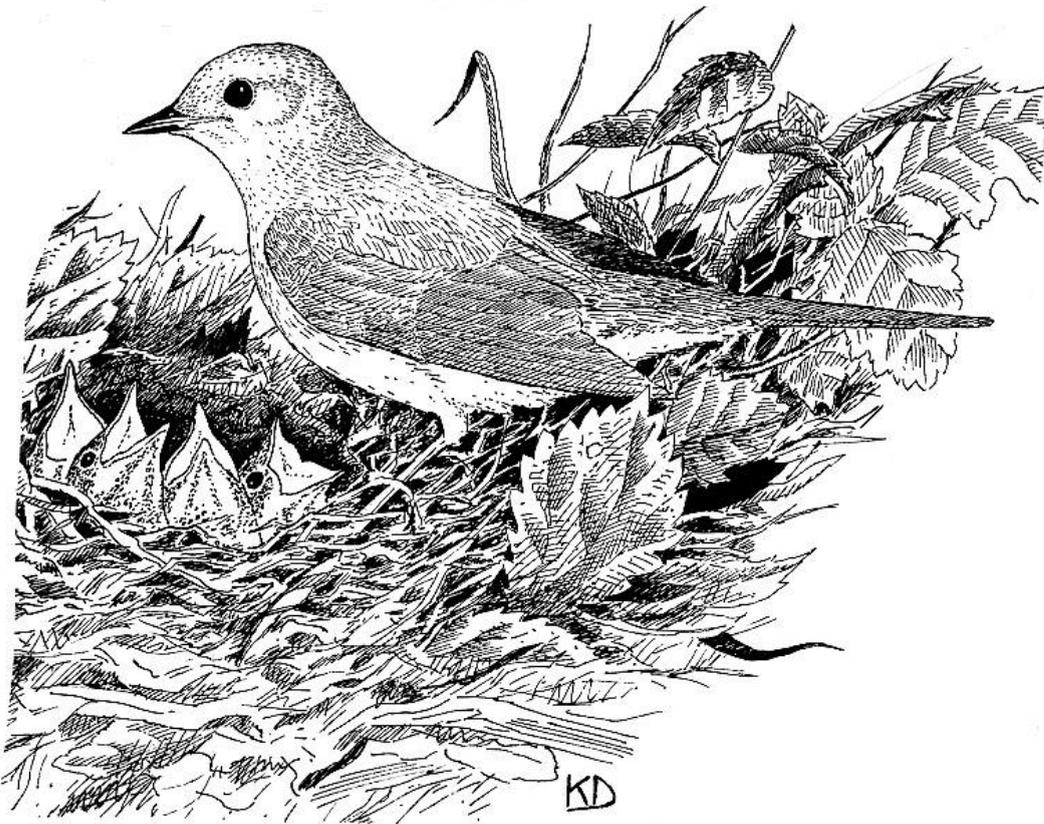


Bird Census News



Newsletter of the European Bird Census Council



Special issue on Pan-European Monitoring

**2003
Volume 16 n°1**

Bird Census News **2003, volume 16 n°1**

Bird Census News is the Newsletter of the European Bird Census Council or EBCC. The EBCC exists to promote the organisation and development of atlas, census work and population studies in all European countries; it promotes communication and arranges contacts between organisations and individuals interested in census and atlas work, primarily (but not exclusively) in Europe.

Bird Census News reports developments in census and atlas work in Europe, from the local to the continental scale, and provides a forum for discussion on methodological issues.

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SUBSCRIPTION: 2 issues/year: April-May and October-November

Standard rate: 1 year- 2 issues: individuals: 9 Euro organisations: 14 Euro

Special offer: 3 years- 6 issues: individuals: 20 Euro organisations: 35 Euro

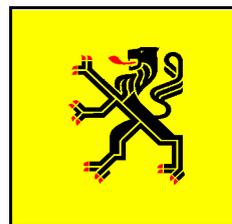
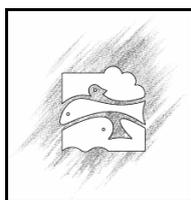
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The publication of Bird Census News has been possible by the financial support of the

Institute of Nature Conservation (I.N.),

Kliniekstraat 25, B-1070 Brussels, Belgium.

The I.N. is a scientific institution of the Ministry of the Flemish Community, Department of Environment and Infrastructure, Administration for the Environment, Nature and Development (AMINAL).



Bird Census News

Volume 16 n°1, July 2003

Preface

This issue is entirely dedicated to Pan-European Monitoring. A first contribution reports on the Pan-European Monitoring workshop held in Prague on 16-19 September 2002, organised by EBCC and BirdLife International. It summarises the main content of the workshop and its conclusions and recommendations. A total of 53 participants from 26 countries took part. Moreover and importantly, European Institutions (European Topic Centre on Nature Protection and Biodiversity, European Commission) were also represented.

In the second part of the issue we present an up-to-date review of large-scale generic population monitoring schemes in Europe. This information is an update of the report in Bird Census News 10/2 of 1998.

Since May the ExCo has doubled its female members! Elena Lebedeva from Russia joined us as replacement of Alexander Mischenko who left the ExCo for professional reasons. Thank you Alexander for your important contribution to the EBCC-work, and welcome to Elena!

For those who did not yet know: go to page 39 and you'll find everything on next EBCC International Conference in Turkey, 6th-11th September 2004. Registration deadline is 1st of October 2003!

Enjoy this issue.

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Report on the Pan-European Common Bird Monitoring workshop

Organised by the European Bird Census Council (EBCC) and BirdLife International

Supported by BirdLife International/Royal Society of the Protection of Birds, Czech Society for Ornithology, Czech University of Agriculture, Forestry Faculty, Prague

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Introduction

A Pan-European Common Bird monitoring workshop was held at Czech University of Agriculture, Forestry Faculty, Prague, on 16-19 September 2002. This brief report summarises the main content of the workshop and its conclusions and recommendations. The full contents, including all presentations, are available freely on CD-ROM from the second author.

Attempts to compile and assimilate European trend data go back at least to Hustings (1988, 1992) and the case for Pan-European monitoring of breeding birds has been made on a number of occasions (Gibbons 1998, 2000 a&b). One can envisage a number of different ways to construct a European scheme. The consensus view, and the one promoted by EBCC, has been to build a Pan-European scheme for common breeding birds by combining data from the pre-existing national schemes, encouraging and initiating new schemes in those countries with the relevant capacity to do so, and establishing a sample of survey plots in the remaining countries. The latter 'international' plots would when taken together provide trend information for that group of countries to feed into the European figures (although the trends within each country would be relatively imprecise). Progress on the first two pillars of a Pan-European scheme has been considerable; there has been little progress on the third.

The Prague workshop is the second of its kind to be organised by the EBCC; the first was held at Villa Cipressi, Varenna, Italy, in September 1996 (EBCC

1997). The Villa Cipressi workshop has been pivotal in the development of bird monitoring in Europe because it defined what monitoring could achieve, the information needs of decision makers, and the principles of best practice in survey design, and considered how information from across Europe could be combined into European indices. It also highlighted the many practical difficulties in developing monitoring programmes national and internationally. An influential recommendation from the workshop was to trial the development of Pan-European Indices using data from a sample of countries. This pilot study showed how it was practical and feasible to combine data of different types of schemes to produce meaningful Pan-European indices for individual species (van Strien & Pannekoek 1998, van Strien et al. 2001).

The workshop thus owed much to what had been learnt at Villa Cipressi and at EBCC conferences, but the workshop was catalysed by a number of significant advances in this field. One is in 'bio-indicators', an area that has advanced considerably in recent years. Wildlife indicators have proved especially useful in conveying information about status and trends in the countryside to non-specialist audiences (e.g. policy & decision makers) in a simple manner. Birds have proven valuable indicators of the general state of nature and have, for example, been adopted as indicators of sustainability in the United Kingdom (e.g. www.sustainable-development.gov.uk/indicators/headline/h13.htm) and are being considered in this role in other European fora. A second is the continued development of national monitoring schemes in, for example, Poland, Hungary, France, Ireland, Spain and United Kingdom, and considerable interest elsewhere to improve existing schemes and their analysis, or initiate new schemes. A third driver has been the appointment a full-time co-ordinator for the Pan-European Common Bird Monitoring (PECBM) project in January 2002.

Against this backcloth, the workshop in Prague set out to review what had been achieved and then look forward to how Pan-European bird monitoring could be developed. In order to help this process and produce tangible results, the focus was solely on the monitoring of common and widespread breeding birds. The following ambitious objectives were tabled for discussion.

The provisional workshop objectives were to:

1. Review the status of common bird monitoring projects across Europe (and thereby update the larger review of Forrest et al. 1996, and Marchant et al. 1997).
2. Agree country-by-country on data provision to feed into Pan-European indices
3. Based on (2), to create Pan-European indices for a group of species for as many countries as possible
4. Based on (3), to create Pan-European indicators based on a group of species and as many countries as possible
5. Based on all the above, to produce the first *State of Europe's common birds* report

6. Finally, to produce a plan of action for Pan-European Common Bird Monitoring over the next five years

This proposal would involve each country producing species indices with standard errors from the starting of the scheme using an appropriate method (i.e. TRIM: Pannekoek & van Strien 1998). From a common starting year, combining indices that had been converted into total bird numbers within each country could create Pan-European indices. Country indices could then be combined to produce European indices for larger biogeographical or geopolitical regions, as required. The next step would be to combine Pan-European indices for individual species to create Pan-European multi-species indicators (using the methods developed in the United Kingdom). These multi-species indicators could be usefully disaggregated to show trends in birds of particular habitats or policy sectors, for example, farmland and forest. Disaggregating the trends in this way will provide a better understanding of their potential causes and policy links.

It was clear at the outset that a comprehensive Pan-European common bird monitoring scheme (one that involved every European country in some capacity of data collection and provision) will take a considerable amount of time and resource to develop. The proposal put to the workshop was to move this grand plan one step closer by compiling data from as many countries as was possible for a selection of species and producing partial Pan-European indices and indicators.

Participation

A total of 53 participants from 26 countries took part in the workshop; almost all countries important for the project were represented with few exceptions (Italy, Spain, Slovenia). Moreover, and importantly, European institutions (European Topic Centre on Nature Protection and Biodiversity, European Commission) were represented.

Workshop content

The workshop was organised into a series of plenary and group discussion sessions. Plenary sessions reviewed the background, the existing monitoring information, the development of national monitoring schemes, linking monitoring information with policy and advocacy needs, and the development and use of trend information. Parallel discussion sessions considered improving the links between monitoring and policy/advocacy needs, proposals for the structure and organisation of a Pan-European Common Bird Monitoring project, proposals for data provision and scope, and finally an agreed plan and timescale to take the project forwards. Discussions were structured so that groups of participants considered a series of issues and reported to the workshop through a single reporter.

Current state of monitoring schemes in Europe

The results of an extensive review of existing common bird monitoring schemes were presented, updated and discussed. The full results of this exercise will be presented separately in *Bird Census News*. The number of countries with large-scale sample surveys has increased greatly over the last two decades. However, many schemes only cover part of a country, some for short periods (some being only newly established), precision may be low, and various biases might exist. Notwithstanding these comments, the general standard of survey design and analysis has advanced considerably in recent years.

Developing national monitoring schemes

Presentations considered the objectives of national monitoring programmes, the principles of good design and of best practice in running surveys. Random or systematic sampling frameworks are ideal for new schemes, particularly when combined with appropriate stratification. We should not, however, lose sight of the considerable value of existing data even though the sampling framework has often been rather undefined or opportunistic, such as free choice. The experience from many countries is that such data has provided vital trend information and has been crucial in conservation work, despite the biases that might exist. The message to emerge from the workshop is that we should make the best possible use of the data that has been collected in the past, while aware of any bias. For some time to come, the historic data will be the best and only source of information to build European indices and indicators. Despite some limitations, the trend information on birds is arguably some of the best monitoring data of its kind in Europe.

It is clear that a number of field methods can be used to survey common birds as long as they meet the objectives of scheme, there is standardization, it is practical and popular with counters and, finally, that the issue of differences in bird detectability is recognised or addressed.

Reports on new schemes in Spain and Hungary, and a re-launched scheme in France, showed that while survey designs were likely to differ between countries because they were adapted sensibly to local conditions (i.e. habitats and traditions of counting), the designs principles shaping the schemes were similar. In each case, the importance of the local or regional scheme organisers was stressed. The other vital ingredient to a successful scheme is rapid and informative feedback to volunteer counters. The concept of an 'exchange of services' between the national scheme organisers and local participants was raised as a useful model. Participants provide data towards the national picture in exchange for local information and feedback at a scale of their own interest. The national picture thus provides the context with which to judge more regional patterns. The relationships

between national coordinator, the regional organiser and the local counter are vital and communication must flow in both directions.

Linking monitoring to policy & advocacy

A series of presentations reviewed the many potential links between bird monitoring data and policy instruments, and considered the gaps between the information needs and provision. The need for biodiversity indicators based on monitoring information is expressed in a number of international fora and reflects different purposes: e.g. to follow up general biodiversity state and trends, to assess the efficiency of targeted policies, or to evaluate the effects of sectoral policies on biodiversity. Arguably, and contrary to other environmental features such as air and water, biodiversity monitoring is still not well organised at European level, although bird monitoring may be an exception and provides the most promising source for policy-relevant indicators at Pan-European level. Stated policy targets, such as 'to halt biodiversity decline by 2010' must be measured against high quality, extensive time series – the European bird data meet these criteria.

BirdLife's Pan-European bird monitoring strategy, which comprises common birds (considered by this workshop), threatened birds and important sites, provides a useful basis to build policy relevant indicators. There are many common themes to the development of each strand of work (from the policy drivers to the observer networks, data management, indicator development, to disseminating and communicating knowledge) and considerable cross over in expertise.

The workshop discussed a range of questions aimed at improving the links between monitoring and policy. Discussions stressed the need to transform monitoring data into attractive and understandable indices or indicators to aid communication with the decision makers. This required good coordination of data gathering and analysis, building on existing examples (UK indicators). Bird indicators tend to be 'state' indicators but we should not lose sight of the value of 'pressure' and 'response' indicators too. There is considerable benefit in subdividing headline indicators by habitat category or geographic area and even by protected area status or areas with agri-environment schemes when this is practical. Note however that there may be technical difficulties in producing the latter subdivisions at the present. Discussions emphasised the need to link monitoring results with current ecological studies and land use information (e.g. LUCAS, CORINE, EUNIS) in order to understand and diagnose the causes of trends.

The workshop identified a number of potential national and international funding sources for monitoring programmes. Debate underlined the need for the monitoring community to communicate with policy makers at an early stage to identify and help define the key policy questions and how they might be addressed given the information available. The clear message to decision makers should be that there is a strong need for long-term monitoring of the

countryside to provide background data and flexibility to answer current and emerging policy questions. Long-term monitoring will also help in the identification of broader ecological processes or problems and in measuring sustainability.

Shaping Pan-European Monitoring

Group discussions considered the overall structure and purpose of a Pan-European monitoring scheme. The objective of such a scheme should be to deliver a picture of common bird trends across Europe (further elements of work could be added to this but common breeding birds remain the immediate focus). In doing so, it should build the capacity of all European countries to carry out monitoring work and be an active part of the programme. Participants were in favour of central organization through an international coordinator who would then liaise with national organizer, who in turn would liaise with volunteer counters. A coordinator would need a blend of skills, from communication, data analysis, database use, providing advice, to web development. An international scheme would benefit individual countries by standardizing methods, sharing expertise and knowledge, increasing communication, potentially raising standards, allowing comparison among countries, would aid fund raising potential (by being part of a large successful programme), make greater use of the data collected, and add kudos and prestige to national projects. An added benefit of involvement would be that each country would have created trend information with standard errors for a large set of species (and the expertise to do this for all species covered by their monitoring programme).

The potential bottleneck and problems in the system will include the delivery of data by volunteers, re-organisation of data and new analysis, delivery of indices by national coordinators, consultation, communication, and the resources to maintain national schemes, as well as the international scheme. National coordinators will be central to the successful operation of the scheme; their contribution needs to be recognised and any difficulties they face addressed.

Discussion groups also considered how each country might fit, in principle, into an international monitoring scheme. Note that those countries in parenthesis were not present and all the categorisations should be treated as provisional. There was however general agreement that Bulgaria, Portugal, Slovakia and Slovenia were the highest priority and best positioned to develop new national common bird monitoring schemes.

Established monitoring scheme, “no problems”	Established & new schemes, “some problems”	Countries wishing to start monitoring	Candidates for international census plots
Finland France	Austria Belgium	Bulgaria Portugal	Belarus (Russia)

Ireland The Netherlands Sweden United Kingdom	Czech Republic Denmark Estonia Germany Hungary Latvia Lithuania Norway Poland Romania (Spain) Switzerland	Slovakia (Slovenia)	Turkey Ukraine
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Those countries not in a position to supply data or establish a monitoring scheme in the mid-term are likely to view a Pan-European monitoring scheme differently from the rest. Involvement may be beneficial to build capacity, standards, raise funds and set up schemes. However, a system that included e.g. a modest number of international plots in each country may have limited national benefit, might be of lower priority within country, and might be limited by volunteers. Notwithstanding these valuable points, all countries present at the workshop and in this situation wished to be part of the Pan-European Common Bird Monitoring scheme.

Planning for a Pan-European common Bird Monitoring Scheme

The proposal put to the workshop was to develop trends and indices for a group of characteristic birds of farmland and forest based on all sites sampled per country from as many countries as possible using TRIM. National indices with standard errors and then supranational indices and indicators with standard errors would be constructed for farmland and forest birds. It was suggested that data should not be drawn from particular habitat types (only farmland sites for farmland birds) because of difficulties of habitat classification and the lack of separate population estimates for these habitats. Indices from regions within countries and for other habitat types would not be collected at this stage.

Participants agreed with the short-term measurement goals set by the project as described above. In the longer term, it was suggested that urban/suburban and wetland birds should be considered too. All were agreed that national indices should be produced using TRIM. Views differed on whether to pursue the idea of producing standard errors on the European indices, though most people were strongly in favour. Technically this is more difficult and requires the most recent version of TRIM to be used. The recommendation therefore would be for countries to submit TRIM output files to the international coordinator, but it was recognised that this might prove difficult in some cases and the option of submitting raw data should not be excluded.

The two habitats were chosen because >50% and >30% of the area of Europe is made up of farmland and woodland respectively; they represent two key policy areas. A draft list of target species was discussed and modifications made; the final agreed list included 24 birds typical of farmland and 24 typical of woodland. Species were included because they were considered typical of the habitats, abundant enough to be adequately monitored in many countries, have large European ranges, are well monitored by standard approaches, and thus have high indicator potential. The groups discussed a potential starting year for indices and data provision, but decided on requesting data from as many years as each national scheme had run and compiling indicators subsequently. This might mean that an indicator would comprise a different set of countries through time but this could be shown graphically. The duration of the indicator has ramifications for political and policy relevance (e.g. Birds Directive 1981), which we should be mindful of, however, data availability is likely to dictate what is possible.

It was agreed that a detailed protocol should be developed on data provision procedures for national coordinators.

The group also discussed the idea of producing the first *State of Europe's Common Birds* report. The intention was to produce a glossy, semi-popular report, for the public, policy makers as well as ornithologists, it should be simple, short, contain key messages, and preferably use pre-existing information on European species alongside the outputs from the workshop. The format would follow *The State of the UK's Birds* report series in the United Kingdom (see <http://www.rspb.org.uk/science/survey/>)

Conclusions

The following objectives were agreed by workshop participants:

- To produce country-by-country species indices with standard errors from each scheme's starting year using sophisticated standardised methods (i.e. the TRIM program)
- To create Pan-European indices for species based on total numbers (following van Strien et al.)
- To combine country indices for species to produce species indices for larger regions
- To produce Pan-European multi-species indicators by combining Pan-European indices for species (following the UK/Dutch model)
- Use groups of species characteristic of habitats as Pan-European habitat indicators (i.e. policy relevant bio-indicators)

It was agreed that the objectives to be achieved by:

- Coordination with central (international) coordinator and national coordinators
- Using volunteer counters for data gathering

- Implementing the idea of a combination of existing monitoring schemes, developing new national schemes and international census plots in some countries.
- Produce and publish the products from the workshop.
- Outputs of the group discussions would be incorporated into the long-term planning process for the project.

Draft timetable for 2002-2003

The following indicative timetable was agreed by the workshop in Prague. The information in italics provides a status report at the time of writing this report. The timetable set was ambitious given that European indices had not been created before on this scale and European indicators had not been constructed before. In reality, we anticipate some modifications may be sensible and necessary to the timetable in light of technical problems and delays, but also to respond to opportunities that might arise.

One of the major suggestions from the workshop, and an idea that had not been in the work plan previously, was the production of a 'best practice guide for national monitoring schemes'. Whilst this remains a very high priority for EBCC, it would not be practical to add this to the existing workload of the Pan-European Common Bird Monitoring Coordinator. The Executive Committee of EBCC has thus discussed an outline for this guide and will take this proposal forward.

1. Final agreement on methods, species & indicators, data provision format for production of Pan-European indices and indicators based on existing monitoring schemes.

End of October 2002 - Completed

2. Publication of the workshop proceedings, including all materials, discussions, conclusions and recommendations (paper & on CD).

November 2002 - Completed

3. Publication of review of breeding bird monitoring schemes in Europe.

December 2002 - To be published in Bird Census News summer 2003

4. Provision of national indices or raw data from national coordinators to project coordinator.

January 2003 - Completed

5. Production of Pan-European species indices.

April 2003 - Slight delay, will be complete by June 2003

6. Production of Pan-European multi-species indicators.

July 2003 – On schedule

7. Production of 5-year plan.

July 2003 – On schedule

8. Pursue funding sources for long-term sustainability.

May-July 2003 – On schedule

6. Production of a best practice guide for national monitoring schemes.

June 2003 – Delayed due to lack of time, planned for winter 2003

10. Publication of the first State of Europe's Common Birds

November 2003 – On schedule

Discussion

The Prague workshop represents a significant step in the development of a Pan-European monitoring scheme for birds and in the delivery of policy relevant bio-indicators for the European environment. The gauntlet thrown down by the policy and decision makers to the bird monitoring community is for the production of indicators at a European scale to assess the general biodiversity state and trends, to assess the efficiency of targeted policies, and to evaluate the effects of sectoral policies on biodiversity. The workshop has shown how robust bio-indicators can be constructed using pre-existing bird-monitoring information (see Gregory et al. 2003).

The status of bird monitoring projects across Europe is, however, variable and considerable barriers are faced in maintaining current counting schemes, and are faced in establishing new schemes. The outcome is a time series that contains many missing values for particular years and countries, and an uneven spread of monitoring project across Europe. Financial support for basic monitoring of common breeding birds by national governments across Europe, and the EU institutions, is at best partial, and often non-existent. A sea change is required on how biodiversity monitoring projects are perceived and how they are supported. At a national level, we need financial support for the development and continued operation of common bird monitoring schemes (for running projects, training coordinators, training volunteers, improving data management, harmonisation and integration etc). At an international level, we need financial support for the development and continued operation of PECBM project (i.e. running costs, supporting data provision by national coordinators, training international coordinators, providing and disseminating best practice, guidance on training volunteers, improving data management, harmonisation and integration, developing a web-based

system for data submission, checking and analysis, and publication of results etc).

The Pan-European Common Bird Monitoring (PECBM) project, which focuses on widespread breeding species in terrestrial habitats, sets out to deliver policy relevant indicators and in doing so to develop and expand common bird monitoring in Europe. The key outputs from the workshop will be Pan-European multi-species indicators for farmland and forest for a large group of species from a good selection of countries. The indicators must be viewed as partial because they do not contain data from every European country. Our aim in the medium- to long-term will be to build the capacity of countries to become part of the programme. The main ways to do this will be to facilitate the introduction of new national schemes where there is interest and capacity to do so, and to introduce an over-arching international scheme in the remaining countries. Both options will require appropriate resource for them to be sustainable, and ultimately deliver the information that is so desperately required by decision makers in Europe.

Acknowledgements

The post of Pan-European Common Bird Monitoring Project Co-ordinator is funded by the Royal Society for the Protection of Birds. A technical group comprising Arco van Strien, David Noble, Ruud Foppen, Petr Vorisek and Richard Gregory assists the project. Special thanks to Norbert Schaffer, Nicola Crockford, Karel Stastny, Jeremy Greenwood and to the team of CSO volunteers who contributed significantly to the workshop organization.

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Review of large-scale generic population monitoring schemes in Europe

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Introduction

Large-scale monitoring of bird populations, through generic programmes in the sense of census schemes that cover a wide range of bird species, arose largely independently in a number of northern European countries but has always had international overtones. The first annual monitoring scheme for breeding birds was the Common Birds Census in the UK, which started in 1962 and used a mapping survey method that had been developed in Sweden. By 1969, the International Bird Census Committee had been formed, with the primary aim of promoting international standards of methodology. Whereas the initial aims of IBCC were quickly achieved, the group has continued to expand and develop its activities, and in 1992 merged with the former European Ornithological Atlas Committee to become the European Bird Census Council (EBCC).

A principle quickly established by IBCC/EBCC is that schemes that operate within one country or smaller regional unit should be neither isolated nor independent, as each can benefit from the experience and results obtained from surveys in neighbouring countries and regions. Synthesis of information across monitoring schemes operating within Europe is therefore of value to all participants, helping to spread knowledge about which species are being monitored in which countries, and where the gaps lie, which methods are used and are best to use, and the costs that may be involved. Such information is also very useful to people considering setting up new schemes. Bringing it all together in readily accessible reviews thus helps to broaden the geographical scope of monitoring and, over time, to improve methodology and perhaps to harmonise it across national boundaries.

There have been three previous reviews of European bird monitoring schemes, the first undertaken by SOVON on behalf of IBCC (Hustings 1988). This early report brought together the results of those European breeding bird surveys that fulfilled the following criteria: they operated at a national scale, used a systematic counting method, and included all bird species found. Before this publication, it was difficult for workers in one country

even to know that bird census data were being collected in another. Access to the results of monitoring would have been dependent either on the availability of a top-class ornithological library or on making the right personal contacts. This report identified seven national breeding bird monitoring schemes then active. Information for each was presented in the form of a description of the field and analytical methods, followed by a summary of progress and a list of references. An annex listed the population index values for each scheme, species and year. There was also a table of species against country, showing which species were monitored where, and by which census method.

The Hustings review heralded the inception, also in 1988, of this newsletter, which was intended to carry updates of new census schemes and latest results. A second, fully updated version of the review, following a similar format, appeared in *Bird Census News* in 1992, including reports on nine national or large-scale schemes (Hustings 1992; see also Kwak & Hustings 1994).

The most recent previous report was based on questionnaires circulated by BTO in 1995 and was funded by RSPB/BirdLife International on behalf of EBCC (Marchant et al. 1998a). This was a much more inclusive project than the previous two, but differed in not requesting or presenting any details of monitoring results. It included all large-scale generic surveys, under the headings of sample surveys, complete surveys, and distribution atlases, with a separate questionnaire for each of these three categories. All 207 replies were summarised in the report, with contact names and addresses for each scheme. Analyses investigated field methods, methods of plot selection and data analysis, numbers of species monitored in each country, habitat coverage, sources of bias and error, and the estimated annual costs of all these surveys, which totalled at least 5 million Deutschmarks (about 2.5 million €). A shortened version of this report, omitting seven of the ten appendices, appeared in *Bird Census News* (Marchant et al. 1998b). All the information received was stored in a database (dBase), which was made available to all contributors.

Aside from promoting and optimising monitoring within national boundaries, EBCC has the further aim of combining data from individual schemes to assess the trends of breeding bird populations on the European scale. This concept of 'Euro-monitoring' was first explored at the meeting of IBCC at Sempach in April 1988, which identified the need for a review of European schemes and led directly to the SOVON report later the same year.

With the publication of a pilot study, in which data for seven countries and five farmland species were combined to produce indices for the period 1978-97 (van Strien et al. 2001), Pan-European Common Bird Monitoring has recently become a tangible reality. The present review is timely, given the interval of seven years since the last circulation of questionnaires, the need to follow up the recent pilot study with a more inclusive analysis, and the need for further expansion of breeding bird monitoring across Europe.

This review is a substantive part of the Pan-European Common Bird Monitoring Project and its objectives were set with the broader objectives of that project in mind. By producing this review we aim:

- *to obtain up-to date information on existing monitoring schemes in Europe, linked to the goals of the Pan-European Common Bird Monitoring Project;*
- *to discover which countries' data could be used for generating an enlarged set of Pan-European indices for birds;*
- *to identify gaps in geographical coverage, and gaps and problems in methodology, survey design and scheme management;*
- *to record progress since the last similar review was produced in 1998;*
- *to adapt the planning of Pan-European Common Bird Monitoring development to the needs and potential of national monitoring schemes;* and
- *to provide a source of motivation and inspiration that will help to drive Pan-European Common Bird Monitoring forward.*

Methods

The objectives of this review, being so closely tied to the aims of the Pan-European Common Bird Monitoring project, were somewhat narrower than for the previous ones. The coverage it requested was limited to large-scale breeding monitoring schemes that were based on sample surveys – ‘large-scale sample surveys’ hereafter. Schemes such as atlas studies, those covering single species or group of species, and those focused on counting migrating birds were not the primary targets of this review. Despite these restrictions, we have received information on several schemes not fitting the criteria and have used it, but only partly, in this review.

Countries or political territories were generally the basic geographical reporting unit. Despite some weaknesses of this approach, political boundaries must remain of prime importance, for funding and administrative reasons. Some schemes, however, cover regions within a country that are large in comparison to the total areas of some European countries. The more extensive regional schemes were therefore included in this review. International schemes, covering all or parts of more than one country, were also included. ‘Large-scale’ therefore means regional, national, or international.

To minimise the burden on our country contacts, we tried to simplify information gathering as far as possible. We took as background the database of information gathered for sample surveys during the previous review, a copy of which was provided by BTO, and asked for updates and supplementary information. For each monitoring scheme already known to us, a part-completed questionnaire was generated, and country contacts were asked to confirm or update the pre-printed information. Blank

questionnaires for new surveys were also widely distributed. We asked fewer questions, compared to the previous review, but included several new ones linked to the objectives of the current project. Several questions were marked as optional. For a sample copy of the questionnaire, see Annex I.

Of 84 records on monitoring schemes available in the 1998 database, 56 fitted the criteria for this survey and part-completed questionnaires for these 56 were sent out, together with some blank ones. Altogether, the questionnaires were posted to 41 countries or territories: Albania, Andorra, Austria, Belarus, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and United Kingdom.

The questionnaires were sent to all monitoring scheme coordinators in individual countries, to all BirdLife International partner organisations, and to all EBCC national delegates. Every questionnaire was sent to at least two people in each country. The circulation was made in April 2002, with a request for the return of completed questionnaires by July 15 2002. Preliminary results were presented at the workshop on the Pan-European Common Bird Monitoring project, in Prague, Czech Republic, during September 16–19 2002. Several questionnaires were received from national coordinators after the initial deadline, however, either at the workshop in Prague or subsequently.

All information received has been stored in a database (MS Excel), with a structure similar to the BTO database on sample surveys. Answers in the questionnaires were evaluated in a similar way to the previous review (Marchant et al. 1998a, b), with a few exceptions. Territory mapping was considered as a separate category of field method in this review, because its specific design is similar to other complete counts (e.g. searching for occupied nests or territories). Also, several schemes using capture methods (usually Constant Effort Site programmes) were reported; these were not included as large-scale sample surveys, however, because the objectives of these schemes usually include estimating survival and productivity, and studying movement patterns, and so differed somewhat from the objectives of this study. Moreover, this review is certainly incomplete in its information on schemes using ringing or individual marking, which should be the subject of a dedicated survey.

Analytical methods were evaluated slightly differently, too. Log-linear modelling, specifically the use of the program TRIM (TRends and Indices for Monitoring data; Pannekoek & van Strien 2001), was treated as a separate category because of its important role in Pan-European Common Bird Monitoring – this program will be used to produce the pan-European indices and trends.

Results

Information was received on 73 existing monitoring schemes and one planned scheme, but only 36 schemes met this review's criteria. Most of the schemes reported, whether or not they fulfilled the criteria, covered the breeding season only (table 1). A few schemes covered either more of the seasons (breeding and wintering, all year) or only the winter period. 'Others', the schemes not matching our definition of a large-scale sample survey, represent various monitoring programmes, including those covering single species or species groups (e.g. Corncrake monitoring in Latvia, Heronries Census and Seabird Monitoring Programme in UK, Monitoring of Water Bird Breeding Populations in the Czech Republic, The Raptor Grid programme in Finland), some of which were international (e.g. Monitoring of raptors and owls).

	Large-scale sample surveys	Others	Total
breeding	31	26	57
breeding & migration	0	2	2
breeding & wintering	2	1	3
all year	1	3	4
winter	2	0	2
unknown	0	5	5
Total	36	37	73

Table 1. Existing monitoring schemes in Europe, according to questionnaires received.

The two schemes in this overview that covered the breeding and migration periods both use ringing methods. We know there are more such schemes active across Europe, both at national and regional levels, but their inclusion was not an objective of this study (see Methods). Five schemes gave no clear information about season, although none of them was a large-scale sample survey. The replies to the questionnaires for these five schemes suggest, however, that most of them are breeding surveys. In line with the objectives of this review, further description and analysis covers only large-scale sample surveys, unless otherwise stated.

A country-by-country overview of breeding large-scale sample surveys is given in table 2; see also the map in figure 1 and Annex II. Twelve countries have schemes that are new since the previous review, but in some of these cases old schemes are still in place (e.g. Latvia, Hungary) and in others a new scheme is based on an older one but with significant changes in field methods, sampling design or other features (e.g. France, Switzerland). The scheme in Cyprus is a regional one that uses timed species counts to derive relative abundance, but has the potential to be developed into a fully representative large-scale sample survey (Pomeroy 1997); this scheme has not been included in our further evaluations. Another specific case is

Belgium, where monitoring is organised regionally (Anselin 1992); a completed questionnaire was returned only for Flanders.

Country	LSBS*	New scheme	Notes
Albania	no		
Andorra	?		no reply
Austria	+	+	
Belarus	no		scheme planned
Belgium	+	+	organised regionally
Bulgaria	no		
Croatia	?		no reply
Cyprus	no	+	(1)
Czech Republic	+		
Denmark	+		
Estonia	+		
Faroe Islands	?		no reply
Finland	+		
France	+	+	
Germany	+		
Gibraltar	no		
Greece	no		
Hungary	+	+	
Iceland	?		no reply
Ireland	+	+	
Italy	+	+	
Latvia	+	+	
Liechtenstein	?		no reply
Lithuania	+		
Luxembourg	+	+	regional
Malta	?		no reply
Moldova	?		no reply
Norway	+		
Poland	+	+	
Portugal	no		
Romania	+	+	
Russia	+		regional
Slovakia	+		(2)
Slovenia	no		
Spain	+	+	
Sweden	+		
Switzerland	+	+	
The Netherlands	+		
Turkey	no		
Ukraine	+		regional
United Kingdom	+		

Table 2. Country overview of large-scale sample breeding surveys (LSBS)*.

Note that some countries have more than one scheme in place. New schemes established since the previous review (Marchant et al. 1998a, b) are marked +. (1)= regional scheme potentially to be developed into fully representative large-scale sample survey, (2)= temporarily suspended, to be re-started



Legend



Country with a scheme(s) in place



Country with new or changed scheme in place



Country with regional or temporarily suspended scheme

?

No information available

Table 3 indicates the years when schemes started and finished. All ongoing schemes are marked as current till 2002; a few schemes were terminated and one (in Slovakia) temporarily suspended. Countries operating more than one scheme have extra rows in table 3. The three schemes given for Belgium correspond with three regions (Brussels, Wallonia, Flanders).

	1941	1962	1969	1973	1974	1975	1980	1981	1982	1983	1984	1985	1986	1987
Austria														
Belgium														
Belgium														
Belgium														
Czech Republic														
Denmark														
Estonia														
Finland														
Finland														
Finland														
France														
Germany														
Hungary														
Hungary														
Ireland														
Italy														
Italy														
Latvia														
Latvia														
Lithuania														
Luxembourg														
Norway														
Norway														
Poland														
Romania														
Russia														
Slovakia														
Spain														
Sweden														
Switzerland														
The Netherlands														
Ukraine														
United Kingdom														
United Kingdom														

Table 3a. Years when schemes started to collect data (1941-1987), and latest years of data collection. Schemes marked till 2002 are still ongoing.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Austria															
Belgium															
Belgium															
Belgium															
Czech Republic															
Denmark															
Estonia															
Finland															
Finland															
Finland															
France															
Germany															
Hungary															
Hungary															
Ireland															
Italy															
Italy															
Latvia															
Latvia															
Lithuania															
Luxembourg															
Norway															
Norway															
Poland															
Romania															
Russia															
Slovakia															
Spain															
Sweden															
Switzerland															
The Netherlands															
Ukraine															
United Kingdom															
United Kingdom															
United Kingdom															
United Kingdom															

Table 3b. Years when schemes started to collect data (1988-2002), and latest years of data collection. Schemes marked till 2002 are still ongoing.

Aside from countries with a long-standing tradition of bird monitoring (UK, Denmark, Finland, Netherlands, Sweden), there are several more with a relatively long time series (Czech Republic, Estonia, Hungary, Latvia, Russia). It is suspected, however, that methodological or logistical difficulties may prevent some of these schemes from contributing fully to Pan-European Common Bird Monitoring. The timespan for Pan-European monitoring purposes may therefore be slightly shorter than table 3 would indicate. A notable feature of table 3 is the development of new national

monitoring schemes during the 1980s and 1990s, resulting from growing interest in bird monitoring across Europe and ever-greater international cooperation.

Scheme coordinators were asked for information about the species or group of species that were monitored by a scheme, and for the number of species reliably monitored. Information on the type and number of species monitored in individual countries, and habitats covered, is given in table 4.

	Species	N. species	
Austria	40-45 songbird species+diverse	45-60	no AFU & >1000m
Belgium	all	65	all
Belgium	no info	no info	no info
Belgium	no info	no info	no info
Czech Republic	all	90	all
Denmark	all	60	all
Estonia	all	50-55	all
Finland	terrestrial	80	all terrestrial
Finland	terrestrial	50	all
Finland	terrestrial	120	all terrestrial
France	terrestrial	89 (100-120)	all terrestrial
Germany	all	100-130	all
Hungary	passerines	20	ABFGMS
Hungary	all	100	all
Ireland	farmland birds	90	all
Italy	passerines and related groups	100	all
Italy	terrestrial	50	all
Latvia	terrestrial	30	AFGS
Latvia	farmland birds	25	AGFS
Lithuania	all	20	AF
Luxembourg	no info	70	all
Norway	all	40	all
Norway	passerines	no info	Alp, Salp
Poland	all	60	all
Romania	farmland birds	15	all, no F & U
Russia	all	no info	all
Slovakia	all	no info	all
Spain	all	100	all
Sweden	no info	no info	all
Switzerland	all	75	all
The Netherlands	all	no info	all
Ukraine	all	50	all
United Kingdom	all	100	all
United Kingdom	all	30	Linear waterways
United Kingdom	water birds	22	Linear waterways
United Kingdom	all	70	AF

Table 4. Species and habitats covered by large-scale sample surveys. A=agriculture, Alp: alpine, B=bogs, F=forest, G=grassland, M=marshes, S=scrubland, Salp= subalpine, U=urban

No information on species type was given for four schemes but, since other information available on these schemes suggests they are not targeted to any particular species or group, these four schemes can be taken to monitor all (common) species. Another 18 schemes were given as monitoring all species, and six schemes terrestrial species; one scheme coordinator listed species and group of species that indicate that most common species are covered (Austria); three schemes (Ireland, Latvia, Romania) are focused mainly on farmland birds, three (Hungary, Italy, Norway) on passerines and related groups, and one on water birds (United Kingdom). Answers to whether a scheme includes common species or rare species, or both, can be used as additional information for species coverage. All schemes qualifying as large-scale sample breeding surveys include either common species only, or both common and rare. Information about the bird species covered by each scheme must be considered also in the context of habitats and field methods – for example, schemes that monitor all species in inland countries cannot cover marine species, for obvious reasons, and different field methods could monitor different sets of species, because of differences in detectability.

Considering the species and habitats that are monitored, schemes in the following 24 countries emerge as potential sources of data for Pan-European Common Bird Monitoring: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine, and United Kingdom. Other factors (e.g. years) also determine whether data are suitable for Pan-European Common Bird Monitoring, however, and so in practice the number of countries would be probably lower. The scheme in Romania is in early development, presently focusing on a limited number of predominantly farmland species; it is thus not currently eligible to provide data for Pan-European Common Bird Monitoring, but may very likely be so in future as the scheme develops. Schemes in Russia and Ukraine are regional ones that are not likely to provide data for Pan-European Common Bird Monitoring in the very near future. In Slovakia monitoring has been temporarily suspended and data are therefore not currently available for the Pan-European scheme. Reliable data from Latvia currently cover only farmland habitats. Despite these limitations, the number of countries able to participate immediately in the Pan-European Common Bird Monitoring appears promising. Other schemes, that presently fail the criteria, represent the potential for future development.

An overview of methods used is given in table 5. Point counts predominate among field methods. Line transects and territory mapping are also used, but no other complete-count methods were represented in this review. Although allowing free choice of plots is the most common practice, more desirable sampling methods have become more widespread recently – there are eleven schemes that use either random or stratified random sampling. Where methods of selection of sample plots are combined, free choice is combined with stratified random, stratified typical, random or systematic, or systematic combined with stratified random. This further illustrates the

trend towards more formal sampling methods and the better design of schemes.

Method of plot selection	Number of schemes using				Totals
	line transect	point counts	territory mapping	combination of methods	
free choice	1	7	3	2	13
systematic	0	1	0	1	2
random	1	3	0	0	4
stratified random/semirandom	3	4	0	0	7
stratified typical	0	1	1	0	2
combination of methods	1	1	1	3	6
Totals	6	17	5	6	34

Table 5. Field methods and selection of sample plots in large-scale sample surveys.

Chaining is still the most common analytical method used to produce trends and indices (table 6), although it has serious limitations and is not generally recommended for calculating trends and indices (ter Braak et al. 1994, van Strien et al. 2001). It seems promising that more sophisticated methods such as generalised linear modelling and TRIM are together as frequent as chaining. Further improvements in the analytical methods used by national monitoring schemes can be expected soon (log-linear models).

Method	N. schemes
chaining	12
GLM	5
loglinear modelling - TRIM	7
combination of methods	4
other/unknown	6
Totals	34

Table 6. Analytical methods used by large-scale sample surveys.

The question on data handling and management systems was one of the new ones since the previous BTO questionnaire. Of 34 schemes, 28 use a database, four do not, and two did not answer. MS Access, MS Excel, dBase and FoxPro databases are the most commonly used (table 7). The 'others' category includes data stored as ASCII files or GIS-linked databases. Thus, data are computerised in most countries with large-scale sample surveys, but it seems there is little or no standardisation of database structure and the types of information stored. This might hinder the development of Pan-European Common Bird Monitoring and should therefore be the subject of further effort.

Type of the database	N. schemes
MS Access	8
MS Excel	4
dBase/FoxPro	4
combination	5
others	5
unknown	2
Totals	28

Table 7. Type of databases used for data storage and handling in large-scale sample surveys.

Discussion

Considerable progress has been achieved in promoting and establishing new monitoring schemes across Europe. Since the last review was published, 13 new monitoring schemes have been established in Europe (table 2). One might expect that newly introduced schemes would use better scheme design and more modern analytical methods in comparison to older schemes. This is confirmed in table 8.

	old schemes	new schemes
Method of plot selection		
free choice	12	1
systematic	2	0
random	0	4
stratified random/semirandom	2	5
stratified typical	1	1
combination of methods	4	2
Totals	21	13
Analytical method		
chaining	10	2
GLM	2	3
loglinear modelling - TRIM	2	5
combination of methods	4	0
other/unknown	3	3
Totals	21	13

Table 8. Comparison of methods of plot selection and analytical methods used by old and new large-scale sample surveys in Europe.

There is a strong trend towards more representative selection of sample plots in new schemes, whereas free choice is a method commonly used by older schemes, and better analytical methods are more often used in new schemes than in older ones. Since free choice of sample plots might bias results, and chaining methods may lead to spurious trends, there is a strong need to improve schemes in these respects in future. Whereas the transition from an older analytical method to a better one may be relatively straightforward,

the question of how to change sampling design without losing valuable information from the past sets a big challenge for the Pan-European Common Bird Monitoring project.

As in the previous review, we asked for information on the approximate annual costs of each scheme, this time using Euros as the unit. Large differences were found between schemes, with annual costs ranging from 300 € to nearly 150 000 €. No information was given for six schemes, and the approximate total annual costs of the remaining 28 schemes was nearly 930 000 €. Total annual costs of all 34 current large-scale sample breeding surveys can thus be estimated at around 1 million €. The value of this information is rather limited, however. Since there were no clear guidelines to indicate which elements should and should not be included, we can assume that some schemes' costs take in all expenditure (e.g. office, coordinator, communication costs, organisation's overheads), while those for others include only the basic items. Furthermore, many monitoring schemes that run on a voluntary basis reported a low figure, whereas their real costs could be much higher. Generally, it is likely that the real costs of running schemes have been underestimated.

The questionnaires also brought in other very useful information on the European monitoring scene. We have received many comments and suggestions, reprints of papers, and lists of references for various monitoring schemes. Some contact details have been updated, and new contacts established with monitoring specialists. Coordinators of a substantial number of schemes expressed their own needs for training in various areas related to monitoring, mostly data analysis, data management, and field methods. Not surprisingly, funding needs have been stressed by many coordinators, perhaps more than training needs, even though no specific question was asked on funding needs in the questionnaire. Financial and human resources are clearly crucial factors for the further development of monitoring schemes in Europe.

Analysis of the questionnaires has shown that some of the questions were not fully understood by all contributors. This was particularly the case for questions with no specified pre-selected answers, such as the number of species covered by a scheme. Confusing answers were often received for questions 2.4 "How often does the whole scheme take place?" and 6.2 "What is the approximate percentage of species included in the scheme, out of the total number of species normally present in the area covered by the scheme?" Answers to these questions had to be standardised during the analysis of the whole data set, and minor misinterpretations might have occurred. More prescriptive questionnaires should be provided for future surveys to avoid the possibility of misunderstanding and confusion.

This survey of surveys has confirmed that there is great potential for the further development of Pan-European Common Bird Monitoring, which will build upon existing monitoring initiatives and encourage and support the establishment of new monitoring schemes. Based on the results of this

review, there could be 20 countries with data potentially suitable for generating Pan-European indices for common birds, according to the framework adopted at the Pan-European Common Bird Monitoring workshop at Prague in September 2002.

Substantial progress has been made in development of common bird monitoring – 13 new schemes have been established since the previous review on monitoring schemes was published. Recently established schemes are better designed and organised, a benefit of the pooling of experience among monitoring specialists across Europe. Existing monitoring schemes clearly have great potential for further exchange of information and for sharing experience.

Various weaknesses and gaps challenge common bird monitoring in Europe, however. There is strong need for training at the national coordination level, and perhaps an even greater need for funding. There must be long-term commitments to funding for national monitoring schemes to make common bird monitoring sustainable. Training and financial support could help to improve scheme design and data analysis in existing monitoring schemes.

The survey has also revealed the remaining gaps in geographical coverage: western European countries have the greatest development of common bird monitoring schemes, while southeastern Europe seems to be the region showing least progress. The biggest challenge is monitoring in eastern European countries (Ukraine, Belarus, Russia) because of their huge area and low density of potential fieldworkers. Existing schemes in some central and eastern European countries also need attention, however, because they usually lack finance and need improvement. Political events, notably the enlargement of the European Union and the related changes in land-use that are expected through the Common Agricultural Policy, should be considered as important factors for the future development of monitoring schemes. Thus, based on this survey, priority countries that need attention are Portugal, Slovenia, Slovakia, Bulgaria, Turkey, Cyprus, Greece, Belarus, Ukraine, Russia, Romania, Czech Republic, Estonia, Latvia, and Lithuania.

Preliminary results from this survey were presented at the Pan-European Common Bird Monitoring workshop in September 2002 in Prague, Czech Republic. Workshop participants recommended continuing to collate and update information on existing monitoring schemes. Ideally, the information should be updated on regular basis, include tables of species coverage, with estimates of precision, and be made available through the Internet.

Despite gaps in the information flow from some countries, the results of this survey give an almost complete picture of the situation in common bird breeding monitoring using sample surveys in Europe. On the other hand, no such summary of information on schemes using ringing methodology, or winter or migration counts, or monitoring single species or groups of species, is available at the moment. Thus, further effort should be also targeted

towards such schemes and information should be collected systematically and regularly in future.

Acknowledgements

This review forms part of the Pan-European Common Bird Monitoring Project, a joint project of BirdLife International and the European Bird Census Council, funded by the Royal Society for the Protection of Birds. We thank Richard D. Gregory and Nicola J. Crockford, both of RSPB, for many valuable comments and suggestions.

Completing this review would not have been possible without the efforts of the many ornithologists across Europe who kindly filled in the questionnaires to inform us about the current state of monitoring schemes in their countries. All contributors to the review are listed below, and we are very grateful to all of them.

International schemes: Ubbo Mammen, Dawn Balmer, Mike Toms.

National or regional schemes: Austria – Michael Dvorak, Norbert Teufelbauer; Belarus – Lyuba Vergeichik; Belgium – Anny Anselin, Peter Symens, Wim van den Bosche; Cyprus – Derek Pomeroy; Czech Republic – Karel Štastný, Petr Musil; Denmark – Erik Mandrup Jacobsen; Estonia – Andres Kuresoo; Finland – Juha Tiainen, Marcus Wikman, Martti Hario, Risto A. Väisänen; France – Frederic Jiguet, Yann Magnani; Germany – Hans-Gunther Bauer, Martin Flade; Greece – Kevin Standring; Hungary – Andras Bóhm, Gergö Halmos, Tibor Szép, Károly Nagy; Ireland – Olivia Crowe; Italy – Lorenzo Fornasari; Latvia – Ainars Aunins, Andris Avotins, Ilze Vilka, Janis Priednieks, Mara Janaus, Oskars Keišs; Lithuania – Petras Kurlavicius; Luxembourg – Patric Lorgé; Netherlands – Rob Vogel; Norway – John Atle Kålås, Magne Husby, Svein-Håkon Lorentsen; Poland – Przemek Chylarecki; Romania – Attila Sandor, Jozsef Szabo; Russia – V. Ivliev; Slovakia – Rudolf Kropil; Slovenia – Luka Božic; Spain – Ramon Marti, Juan Carlos del Moral; Sweden – Sören Svensson, Ake Lindstrom; Switzerland – Hans Schmid; Turkey – Uygur Ozesmi; Ukraine – Igor Gorban; United Kingdom – Rob Fuller, Michael Raven, Richard Thewlis, Roddy Mavor.

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Annex I. Sample copy of the questionnaire on large-scale sample surveys.

Questionnaire on existing monitoring schemes in Europe

1. ADMINISTRATIVE DETAILS

1.1. Country (countries) where scheme is located:

1.2. Name of scheme:

1.3. Organization responsible for running the scheme:

1.4. Contact name(s) & address(es):

1.5. Person completing the questionnaire (*If different from above, name, address, telephone, fax, e-mail*):

2. DATES

2.1. Year that the full scheme started to collect data:

2.2. What was the final year of data-collection of the scheme? (*“ongoing” if the scheme is still running*).

2.4. How often does the whole scheme take place?

(Several times a year; Once a year; Every ...years; How many? ..):

3. GEOGRAPHICAL SCOPE

International/National/Regional?

(name of country/countries, or region)

5. HABITATS

5.1. Which habitats occur in the sample?

(please select from followings: all habitats; coastal and salt-tolerant communities; freshwater; scrub and grassland; forests; bogs and marshes; inland rocks, scree and sands; agricultural land; artificial landscapes; other):

5.2. Are habitats features recorded as part of the survey?

YES ? NO ?

6. SPECIES

6.1. Number of species that are reliably monitored by the scheme:

6.X. Species/groups of species monitored by the scheme:

6.2. What is the approximate percentage of species included in the scheme, out of the total number of species normally present in the area covered by the scheme?

OPTIONAL.

6.3. Does the scheme include common species, rare species or both?

8. METHODOLOGY

Method used:

(please specify - point counts, line transect, complete counts, capture etc.):

9. METHOD OF SELECTION OF PLOT LOCATION

9.1. Method used:

(please specify - free, systematic, random, stratified random, stratified typical, other):

9.2. If plots are selected within strata, what are the strata used?

10. ANALYTICAL DETAILS

Which method is used to assess long-term changes in the population?

(please specify - chaining, Mountford's method, Underhill's method, Route regression, method based on General Linear Model (GLM), other regression methods, other methods):

12. APPROXIMATE ANNUAL COSTS OF THE SCHEME

Annual costs:

OPTIONAL (*In Euro*)

ADDITIONAL QUESTIONS

Who provides support to the scheme (financial, logistical), if any support exists?

OPTIONAL

Does your organization/institution wish to start any new monitoring scheme in near future? If yes, please specify briefly.

OPTIONAL

Is the data stored in the database, if yes, which kind?

Does your organization/institution need training in monitoring methodology? If yes, please specify briefly.

OPTIONAL

Own comments:

OPTIONAL

Important references to papers where results/methods of the scheme were published:

OPTIONAL

Annex II.

Austria: *Monitoring der Brutvögel Österreichs*

Michael Dvorak & Norbert Teufelbauer, BirdLife Austria, Museumplatz 1/10/8, A-1070 Wien, Austria. E-mail birdlife@blackbox.net

Belgium – Flanders: *Breeding birds survey*

Anny Anselin, Glenn Vermeersch, IN, Kliniekstraat 25, 1070 Brussel, Belgium. E-mail Glenn.vermeersch@instnat.be

Belgium – Wallonia : *Inventory and surveillance of the Biodiversity of birds in Wallonia (ISB)*

Jean-Paul Jacob, AVES, 3 rue Fusch, Liège, B-4000, Belgium. E-mail jp-jacob@aves.be.

Belgium – Brussels : *Inventory and surveillance of the Biodiversity of birds in Brussels (ISB)*

Anne Weiserbs, Jean-Paul Jacob, AVES, 3 rue Fusch, Liège, B-4000, Belgium. E-mail a.weiserbs@skynet.be, jp-jacob@aves.be.

Cyprus: *to be decided*

Derek Pomeroy, C/o Environment Studies Centre, Kritou Terra, Paphos District, Cyprus. E-mail: derek@imul.com

Czech Republic: *Breeding Bird Census Programme*

Karel Štastný, Czech University of Agriculture, Forestry Faculty, Department of Ecology, Kamýcká 129, 165 21 Praha 6 – Suchbátka, Czech Republic. E-mail stastny@lf.czu.cz

Denmark : *Point count censuses of breeding & wintering birds*

Erik Mandrup Jacobsen & Michael Grell & Henning Heldbjerg, Dansk Ornitologisk Forening (DOF- BirdLife DK), Fuglenes Hus, Vesterbrogade 140, DK-1620, Copenhagen V, Denmark. E-mail ERI@hedeselskabet.dk, michael.grell@dof.dk, henning.heldbjerg@dof.dk

Estonia: *Point Count Project*

Andres Kuresoo, P.O. Box 227, EE-5002 Tartu, Estonia. E-mail akuresoo@zbi.ee

Finland: *Annual monitoring of breeding land birds*

Risto A. Väisänen, Zoological Museum, Finnish Museum of Natural History, P.O. Box 17, P. Rautatiekatu 13, FIN-00014, Helsinki, Finland. E-mail risto.vaisanen@helsinki.fi

Finland: *Summer bird atlas of breeding birds*

Timo Pakkala & Risto A. Väisänen, Zoological Museum, Finnish Museum of Natural History, P.O. Box 17, P. Rautatiekatu 13, FIN-00014, Helsinki, Finland. E-mail risto.vaisanen@helsinki.fi

Finland: *Line transect censuses of breeding land birds - Long-term monitoring of breeding land birds*

Risto A. Väisänen, Zoological Museum, Finnish Museum of Natural History, P.O. Box 17, P. Rautatiekatu 13, FIN-00014, Helsinki, Finland. E-mail risto.vaisanen@helsinki.fi.

France : *Temporal Survey of Common Birds (Suivi Temporel des Oiseaux Communs = STOC)*

Frederic Jiguet, CRBPO, 55 rue Buffon, 75005 Paris, France. E-mail fjiguet@cimrs1.mnhn.fr, stoceps@mnhn.fr

Germany: *DDA monitoring programme for common breeding birds*

Martin Flade, Landesanstalt für Grossschutzgebiete, Am Stadtsee 1-4, D-16225 Eberswalde, Germany. E-mail martin.flade@lags.brandenburg.de.

Hungary: *Point counts of passerines*

Andras Bóhm, Hungarian Ornithological Society, Költö ut 21, H-1121 Budapest, Hungary. E-mail bohmm@mail2.htm.hu."

Hungary: *Mindennapi Madaraink Monitoringja, MMM (Monitoring of our common birds)*

Tibor Szept, College of Nyiregyhaza, Sostoi ut 31/B, H-4400 Nyiregyhaza, Hungary. E-mail szept@zeus.nyf.hu & Karoly Nagy, MME BirdLife Hungary Monitoring Centre, P.O.Box 286, H-4401 Nyiregyhaza, Hungary. E-mail nagykamme@freemail.hu."

Ireland: *Countryside Bird Survey (CBS)*

Dick Coombes, CBS coordinator, BirdWatch Ireland, 8 Longford Place, Monkstown, Co. Dublin, Ireland

Italy: *MITO2000 (Monitoraggio Italiano Ornitologico)*

Lorenzo Fornasari, DISAT, Univ. Milano Bicocca, Piazza della Scienza 1, I-20126 Milano, Italy. E-mail Lorenzo.fornasari@unimib.it

Italy: *Long-term count*

Lorenzo Fornasari, DISAT, Univ. Milano Bicocca, Piazza della Scienza 1, I-20126 Milano, Italy. E-mail Lorenzo.fornasari@unimib.it. "

Latvia: *Breeding Bird Counts*

Janis Priednieks, University of Latvia, Department of Zoology and Animal Ecology, Kronvalda Bulv. 4, LV – 1586, Riga, Latvia. E-mail jpriedn@lanet.lv.

Latvia: *Monitoring of birds and habitats in agricultural lands*

Ainars Aunins, Latvian Fund for Nature, Kronvalda bulv. 4, Riga, LV-1586, Latvia. E-mail dubults@lanet.lv

Lithuania : *Monitoring of breeding birds*

Petras Kurlavicius, Lietuvos Ornitologu Draugija (LOD), Naugarduko St. 47-3, LT-2006, Vilnius, Lithuania. E-mail Petras.Kurlavicius@birdlife.lt, LOD@birdlife.lt.

Luxembourg : *IPA - Points d' écoute*

Patric Lorgé, Centrale Ornithologique LNVL, Haus von der Natur, Route de Luxembourg, L-1899 Kockelschever. E-mail secretary@luxnatur.lu.

Norway: *Norwegian breeding bird census*

Magne Husby, Nord-Trondelag University College, Rastad, NO-7600, Levanger, Norway. E-mail magne.husby@hint.no.

Norway: *Monitoring programme for terrestrial ecosystems - passerine birds*

John Atle Kalas, Norwegian Institute for Nature Research, Tungasletta 2, N-7005 Trondheim, Norway.

Poland: *Monitoring Pospolitych Ptakow Legowych (MPPL) (Common Breeding Bird Monitoring Scheme)*

Przemek Chylarecki, Museum & Institute of Zoology, Polish Academy of Sciences, Wilcza 64, 00-679 Warszawa, Poland, E-mail pch@miiz.waw.pl.

Romania: *Breeding bird monitoring scheme (PMSC)*

Attila Sandor, Jozsef Szabo, ROS, Str. Gheorge Dima 49/2, Cluj, RO-3400, Romania. E-mail adsandor@delfin.klte.hu

Russia : *Bird population monitoring - Tatarstan - middle Volga region*

Dr V. Ivliev, Institute of Natural Systems Ecology, Dauruskaja St. 28, Kazan 420087, Tatarstan, Russia

Slovakia: *Monitoring of breeding bird populations in Slovakia*

Rudolf Kropil, Faculty of Forestry, Technical University, Department of Forest Protection and Wildlife Management, Masarykova 20, 96053, Zvolen, Slovakia. E-mail kropil@vsld.tuzvo.sk

Spain: *Common Breeding Bird Monitoring Scheme ("SACRE")*

Ramón Martí & Juan Carlos del Moral, Sociedad Española de Ornitología (SEO/BirdLife), Melquiades Biencinto 34, ES-28053, Madrid, Spain. E-mail rmarti@seo.org, jcdelmoral@seo.org.

Sweden: *Swedish Breeding Bird Census*

Ake Lindstrom, Department of Ecology, Ecology Building, Lund University, Lund, S-22362, Sweden. E-mail ake.lindstrom@zooekol.lu.se

Switzerland: *Monitoring Häufige Brutvögel (Monitoring of abundant breeding birds)*

Hans Schmid, Schwiss Ornithological Institute, CH-6204 Sempach, Switzerland. E-mail hans.schmid@vogelwarte.ch

The Netherlands: *BMP - Common breeding species project*

Arend van Dyk, SOVON, Rijksstraatweg 178, 6573 DG Beek-Ubbergen, The Netherlands.

Ukraine: *Counts of birds in Western Ukraine*

Igor Gorban, Ukrainian Ornithological Society (UOS), Lviv 79005, Box 6648, Ukraine. E-mail ihorban@yahoo.com

United Kingdom: *Breeding Bird Survey*

David Noble, BTO, The Nunnery, Thetford, Norfolk IP24 2PU, UK. E-mail david.noble@bto.org.

United Kingdom: *Waterways Breeding Bird Survey*

John Marchant, BTO, The Nunnery, Thetford, Norfolk, IP24 2PU, UK. E-mail john.marchant@bto.org.

United Kingdom: *Waterways Bird Survey*

John Marchant, BTO, The Nunnery, Thetford, Norfolk, IP24 2PU, UK. E-mail john.marchant@bto.org.

United Kingdom: *Common Birds Census*

John Marchant & Richard Thewlis, BTO, The Nunnery, Thetford, Norfolk IP24 2PU, UK. E-mail john.marchant@bto.org



ERCIYES UNIVERSITY

**16th International Conference of the
European Bird Census Council
6th-11th of September 2004, Kayseri, Turkey**

Registration deadline: 1st of October 2003

Online registration: www.kustr.org/ebcc2004

The European Bird Census Council (EBCC), Erciyes University, and Dođa Derneđi (DD) are pleased to invite you to attend the 16th International Conference of the EBCC, which will be held in Kayseri, Turkey from 6th-11th of September, 2004.

The conference aims to share knowledge of all aspects of bird monitoring across Europe and is open to those with interests in the following related issues:

- Monitoring: sampling design, field methods and analysis
- Monitoring using capture techniques
- Monitoring conservation action and policy
- Accession to European Union and Monitoring
- Pan-European Monitoring and Indicators
- Integrated Population Monitoring
- Atlas studies
- Modeling Bird Numbers and Distributions
- Monitoring ecological disasters
- Climate Change
- Setting conservation priorities
- Site or protected areas monitoring
- Citizen Science: Working with volunteers

Plenary speakers on these topics will include: Franz Bairlein (Migration), Ali Stattersfield (Prioritisation of Species), Frank Gill (Citizen Science Projects), Carsten Rahbek (Complementarity and Biodiversity Hotspots), Brian Huntley (Climate Change), and Sancar Barýb (Birds in Turkey).

Organization of the scientific content of the conference is undertaken by the Scientific

Committee with help from the Local Organizing Committee.

Proceedings of the conference will be published in [Turkish Journal of Zoology](#) and edited by Dr. Uygur Ozesmi and Dr. Can Bilgin

SCIENTIFIC COMMITTEE

Member of the committee will include: Dr. David Gibbons; Dr. Richard Gregory; Dr. Tibor Szép; Dr. Loranzo Fornasari, Dr. Ward Hagemeyer, Dr. Uygur Özesmi, and others to be appointed.

LOCAL ORGANIZING COMMITTEE

Dr. Uygur Özesmi, Chairman

Güneşin Aydemir
Bahtiyar Kurt
Nurettin Özbağdatlı

Handan Tezbaşaran
Burcu Arık
Gökmen Yalçın

THE TURKISH CONFERENCE

Kayseri is situated in the center of Turkey, at the foothills of an extinct volcano, Mount Erciyes (3916 m). The city has a population of 550 thousand residents. Intercity buses to and from Istanbul and Ankara leave hourly with a journey time of 11 and 5 hours respectively. There are two flights per day, one in the morning and one in the evening from and to Istanbul with a journey time of 1hr 20 minutes.

Some links about Kayseri

<http://www.erciyes.edu.tr/english/kayseri.php>

<http://www.tbb.gen.tr/english/tourism/religion/kayseri.html>

<http://www.anatolia.com/anatolia/destinations/kayseri/default.asp>

Mid and post conference Bird-watching field trips will be organized to several Important Bird Areas (IBAs) such as Sultan Marshes which is a Ramsar site and Tuzla (Palas) Lake. There will be trips to Mount Erciyes, Aladaglar and Capadocia. The conference will take place during peak migration time when a high diversity and abundance of birds will be travelling through the region. Species that can be observed include White and Dalmatian Pelican, Black Stork, Glossy Ibis, Spoonbill, Flamingo, Ruddy Shelduck, White-headed Duck, Egyptian Vulture, White-tailed Eagle, Osprey, Imperial Eagle, Pallid Harrier, Long-legged Buzzard, Levant Sparrowhawk, Lesser Kestrel, Crane, Demoiselle Crane, Great Bustard, Greater Sand Plover, Spur-winged Plover, Sandgrouse, Great Spotted Cuckoo, Lesser Short-toed Lark, Bimaculated Lark, Radde's and Alpine Accentors, Rufous Bush Robin, White-throated Robin, Isabelline, Pied and Finsch's Wheatear, Ruppell's Warbler, Rock Nuthatch, Masked Shrike, Choughs, Rose-coloured Starling, Spanish and Rock Sparrows, Snowfinch, Red-fronted Serin, Crimson-winged Finch, Cretzschmar's, Cinereous, and Black-headed Bunting.

The official language of the conference will be English.

POSTAL ADDRESS FOR CORRESPONDENCE

Bird Numbers 2004
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Çevre Bilimleri Anabilim Dalı
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