



European Red List of Birds

Compiled by BirdLife International



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Table of contents

Introduction	4
Foreword	5
Acknowledgements	6
Executive summary	8
1. Background	10
1.1 The European context	10
1.2 Red Lists	10
2. Methodology	12
2.1 Red List assessment process	12
2.2 Geographic scope	14
2.3 Taxonomic scope	14
3. Results and discussion	16
3.1 Overview	16
3.1.1 Red List status of European birds	16
3.1.2 Population trend of European birds	17
3.2 European bird species changing Red List category	18
3.3 Status and trends of European birds by taxonomic and functional group	24
3.4 Status and trends of European birds by main type of habitat	26
3.5 Gaps in knowledge	29
4. Biodiversity protection in Europe and the EU	30
5. Recommendations and future work	32
5.1 Recommendations for policy and practice	32
5.2 Conclusions	34
5.3 Future work	34
References	35
Appendixes	38
A.1 Red List status, trend and population size estimate, as well as endemism of birds in Europe	38
A.2 Countries and territories covered by the European Red List of Birds	48

Introduction



Martin Harper

Regional Director, BirdLife Europe and Central Asia

The goal of nature conservation is to keep common species common, to prevent threatened species from becoming extinct and to ensure that humans continue to benefit from the services that nature provides; such as pollination, clean water, flood protection, a stable climate, recreation and inspiration.

By assessing the extinction risk of all 544 wild bird species in Europe, this update to the European Red List shows how we are doing in meeting this ambition by using birds as the most visible and best studied indicators of biodiversity.

Like so many recent reports about the state of nature, the headlines do not make for comfortable reading. Nearly one in eight European bird species are threatened. The groups of species most at risk are seabirds, wildfowl, waders and raptors; but our analysis shows renewed concern about declining trends in the populations of migratory birds, especially long-distance migrants, farm/grassland species and potentially forest birds. It is alarming to see the status of iconic species like Demoiselle Crane, Common Swift and even Rook deteriorate alongside declines in the population of most larks, shrikes and buntings.

The results demonstrate that we are failing to manage our land, freshwater and seas sustainably. We want and need Europe to lead the world in restoring nature, but for that to happen, nothing short of a transformation to our economies is needed.

This transformation must begin NOW, in what the UN has called the Decade of Ecological Restoration. This is essential for our region to fulfil its new international obligations under the Convention on Biological Diversity, which (in its current draft of the global biodiversity framework) is setting a new milestone for extinction risk to be "reduced by at least 10 percent, with a decrease in the proportion of species that are threatened, and the abundance and distribution of populations of species enhanced or at least maintained."

While the headlines in the new Red List are stark, we should feel optimistic that we can make things better, because within the report, there is some good news. The improved status of Red Kite and Azores Bullfinch – two remarkable conservation success stories – shows that targeted approaches to species recovery can work; while interventions such as well-designed agri-environment schemes can provide a lifeline to threatened species like Corncrake. Yet, this optimism must be conditional on governments, businesses and civil society playing their part to the full.

Governments across Europe need to translate the new global ambition to restore nature into legal targets, backed up by the right policies and funding. Businesses must find new ways to be nature positive, ensuring that their commercial activity improves the state of biodiversity. Civil Society, including BirdLife International Partners, must continue to champion urgent action but also be prepared to take practical steps to help recover threatened species.

The results from this report (and other resources such as the new European Breeding Bird Atlas or the Common Bird Monitoring Scheme) should help decision-makers and will inform the development of a new list of Species of European Conservation Concern to help prioritise future conservation effort. More than that, we hope that it serves as a catalyst for more people and organisations to take action to help Europe's birds.

In future European Red Lists, we want to be able to report a reduction in the number of species at risk of extinction, but to do that, we all have to change the way we think and act.

Foreword



Micheal O'Briain

Deputy Head of the Nature Unit, DG Environment, European Commission

Ever since Rachel Carson's 'Silent Spring' the role of wild birds as key indicators of the state of our environment has become increasingly recognised. Monitoring bird populations is essential to review the progress made towards achieving conservation goals, address gaps in knowledge, and define priorities for conservation action.

BirdLife International's latest updated European Red List of Birds provides a critical assessment of the health of Europe's birds. Based on data gathered in over 50 countries and territories, this major compilation and synthesis of knowledge, much of it undertaken by volunteers, reveals that we are still experiencing the loss of nature across our continent. It is particularly important in determining the risk of extinction, revealing that 13% of European birds are threatened with extinction with another 6% Near Threatened. Of 544 species assessed 30% of them are showing a decreasing trend.

How can we still be facing such a continued erosion of nature given that we have strong legislation for the conservation of birds and other wildlife in Europe since 1979? The EU Birds and Habitats Directives, the Bern Convention on European Wildlife, the Convention of Migratory Species and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds all provide a valuable framework for co-operation and action to conserve species, sites and habitats.

However, despite some significant achievements in European conservation, especially in setting up the Natura 2000 network of protected areas, there are still major shortcomings in the implementation of nature legislation. Conservation action is frequently lacking or incomplete and not taking place at the necessary scale to address the key pressures and threats that wild birds are facing. These include land use changes, particularly linked to agriculture, as well as urbanization, forestry, alterations to freshwater habitats, pollution, overexploitation and illegal killing and invasive alien species, all of which negatively affect nature. On top of all these problems, climate change is emerging as a key threat to the future of our avifauna.

Is there any basis for optimism? We know that targeted action does halt and reverse the decline of species. There are inspiring success stories in Europe with emblematic species such as the Bittern, Griffons Vulture and Red Kite all showing recovery

in areas where they have benefitted from conservation action, frequently supported by initiatives such as the EU LIFE programme. There is now also a much greater public appreciation of the fact that the climate and biodiversity crises are closely interlinked and that restoring our natural capital is essential for economic prosperity and human wellbeing.

This is reflected in renewed commitments for the recovery of nature, including the UN declaring the 2020's as the decade on ecosystem restoration to heal our planet. The EU Biodiversity Strategy for 2030 has set ambitious targets, including extending legal site protection to at least 30% of the EU's land and sea area, 10% of which should be strictly protected, with all of the sites to be under effective management. It also commits to ensuring that by 2030 there is no further deterioration in any habitats and species listed in the Nature Directives and that there is a positive strong trend for at least 30% of those in poor or bad state. A new EU Nature Restoration legal instrument is under preparation, which should provide a major impetus to the restoration agenda in the coming years. Hopefully, these initiatives will inspire similar commitments for the recovery of nature elsewhere in Europe and at global level.

Translating ambitious targets for the recovery of nature into effective action will require very significant human and financial resources over the coming years. Realising the full potential of existing nature and other environmental legislation will be central to success. However, as recognised in the EU Green Deal there is also an urgent need for a fundamental shift in the way we live, particularly in our production and consumption patterns. The attainment of biodiversity and climate objectives will need to be embedded into all relevant policy sectors. There are great opportunities to transition to a just and fair green economy but this will require fully engaging business and other key stakeholder groups such as farmers, foresters and fishers, which affect land and water use across Europe.

As revealed by Eurobarometer surveys that gauge public opinion, European citizens want and expect us to succeed in halting and reversing the loss of biodiversity. This new Red List of Birds provides a vital baseline to assess future progress towards restoring the health of our shared natural heritage.

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Executive summary

The European Red List of Birds is a review of the regional extinction risk of all 544 species of birds occurring regularly and naturally in Europe. The assessment, performed by BirdLife International for the fourth time (1994, 2004, 2015 and 2021), follows the IUCN Red List Categories and Criteria applied at regional level. Evaluating the extinction risk of each species – i.e., Least Concern, Near Threatened or threatened, and if the latter, to what level – helps to inform decision making, shaping national and international environmental policies and on-the-ground conservation action.

The results presented in this report¹ are based on data collected by thousands of experts and volunteers from 54 countries and territories across Europe, extending from Greenland, Iceland and Svalbard in the North to the Canary Islands, Malta and Cyprus in the South, and from the Azores in the West to the Caucasus and Ural Mountains in the East. Additional sources such as scientific reports, national atlases and Red Data Books, as well as peer-reviewed literature were also used to make sure the most recent data available were used. The data, compiled in 2019, encompass the 1980-2018 period.

At the European regional level, 13% (71 species) of bird species are threatened, with approximately 2% (8 species) Critically Endangered, nearly 3% (15 species) Endangered, and nearly 9% (48 species) Vulnerable. A further 6% (34 species) are considered Near Threatened, while five species are considered Regionally Extinct. Changes between Red List categories since the previous assessment in 2015 were recorded for 84 species, of which 37 species were classified in a higher extinction risk category and 47 in a lower category. Most of these changes are due to genuine deterioration or improvement in the species populations, while a smaller proportion are related to artefacts, e.g., due to changes in the methodology of field data collection, calculation of trend values, or previous under- or overestimation of population size. Another 13 species have been assessed for the first time due mainly to taxonomic changes.

Seabirds, wildfowl, waders and raptors each have the highest proportion of threatened and Near Threatened species per taxonomic group, along with smaller groups such as kingfishers, bustards and grebes. When looking at trends, over 40% of wildfowl and wader species, over 30% of seabirds, as well as 25% of raptors, are experiencing population declines. Relatively high proportions of declining trends are also observed among migratory birds, with 121 species considered sub-Saharan migrants (of which 33% have declining trends), compared to species that are migratory but do not migrate as far as sub-Saharan Africa (of which 31.5% have declining trends).

A comparison between main habitat types in Europe shows that farmland and grassland, as well as marine habitats, have the highest number of associated threatened and Near Threatened species. This is supported by the fact that approximately 30% of species associated with these habitats have a decreasing trend. Among species associated with forest habitats, those with decreasing, stable, increasing and unknown trends share a quarter of the total each. Rocky habitats like inland cliffs and mountain peaks have the highest proportion of species with unknown trends (more than 50%), and a third of all species associated with marine habitats and shrubland also have unknown trends.

Despite having an exceptional history of data collection and environmental surveillance, Europe's knowledge base on birds still has a lot of room for improvement. Good cooperation between governments, organisations and institutions, as well as coordinated international efforts in research and bird monitoring, supported by the availability of dedicated resources, are essential to successfully inform and address conservation issues across the continent. The models of the legal mechanisms (e.g. reporting under art. 12 of the Birds Directive) and financial mechanisms (e.g. LIFE Programme) of the European Union play a crucial role in this process.

The results confirm the overall conclusions found in other studies. Large scale land use change, the intensification of agricultural practices, the development of infrastructure, the over-exploitation of marine resources, the pollution of inland waters and unsustainable yet commonly used forestry practices are the main drivers of bird population declines observed in European habitats. Ongoing population declines and range contractions in widespread species of open habitats – like larks, shrikes and buntings – clearly demonstrate the impact of disappearing mosaic landscapes and the increased use of agricultural chemicals. Although some raptor species have made recent population recoveries due to legal protection and targeted conservation activities, many raptor species dependent on open habitats (e.g. grassland and shrubland) for prey are still in decline. In the marine environment, birds suffer from bycatch and incidental killing (due to fishing and hunting activities), as well as invasive non-native species, disturbance and water pollution (originating from both land and sea). Many species of birds are legally hunted across Europe, while millions die every year from illegal killing.

In addition to these threats come the unpredictable effects of climate change on species populations. Current knowledge suggests that for certain species climate change is or will be a major drive for range shifts, while for others it may significantly increase their extinction risk.

¹ Also available on <http://datazone.birdlife.org> and <https://www.iucnredlist.org>.



1.

Background

1.1 The European context

Europe, with its 10.18 million km² (approximately 7% of Earth's land surface), offers suitable habitats for over 70 bird taxonomic families comprising over 540 species (approximately 5% of the global avifauna). A fifth of these species are endemic or near-endemic to the region. Birds are an important part of European biodiversity. They fulfil specific roles within the diversity of ecosystems, and their status has been recognised as a good indicator of the state of the natural environment. Therefore, knowledge about birds can help us identify, predict and understand changes, and take adequate action to prevent the loss of biodiversity and valuable resources derived from nature.

The European landscape has been continually shaped and modified by humans over thousands of years. With the historical expansion of people, habitats have gradually transformed from natural wild areas to settlements, roads, managed woodland, rivers and lakes, farmed land and pasture. With these alterations, there has come a change in the bird communities present (e.g., species that would have naturally favoured grassland and woodland edge habitats as new opportunities emerged have become relatively more abundant; whereas species dependent on habitats and features that were not present in towns and farmland (such as forest- or wetland-dependent species) have been gradually displaced).

However, the rate of global change in nature during the past 50 years is unprecedented in human history². Inevitably, many species populations have declined dramatically. For example, birds of prey like the Red-footed Falcon (*Falco vespertinus*) have suffered from significant deterioration in their food supply due to the massive use of pesticides in agriculture³, adding to other threat factors such as persecution and infrastructure intensification.

Species monitoring has been indispensable in understanding these drivers of decline over time, and have contributed to the assessment of species' risk of extinction. As a result, informed decisions to undertake conservation actions like legal protection, ceasing the use of certain chemicals, or creating new nesting opportunities for birds have resulted in halting declines in certain species (e.g., Peregrine Falcon (*Falco peregrinus*) or Red Kite (*Milvus milvus*)).

1.2 Red Lists

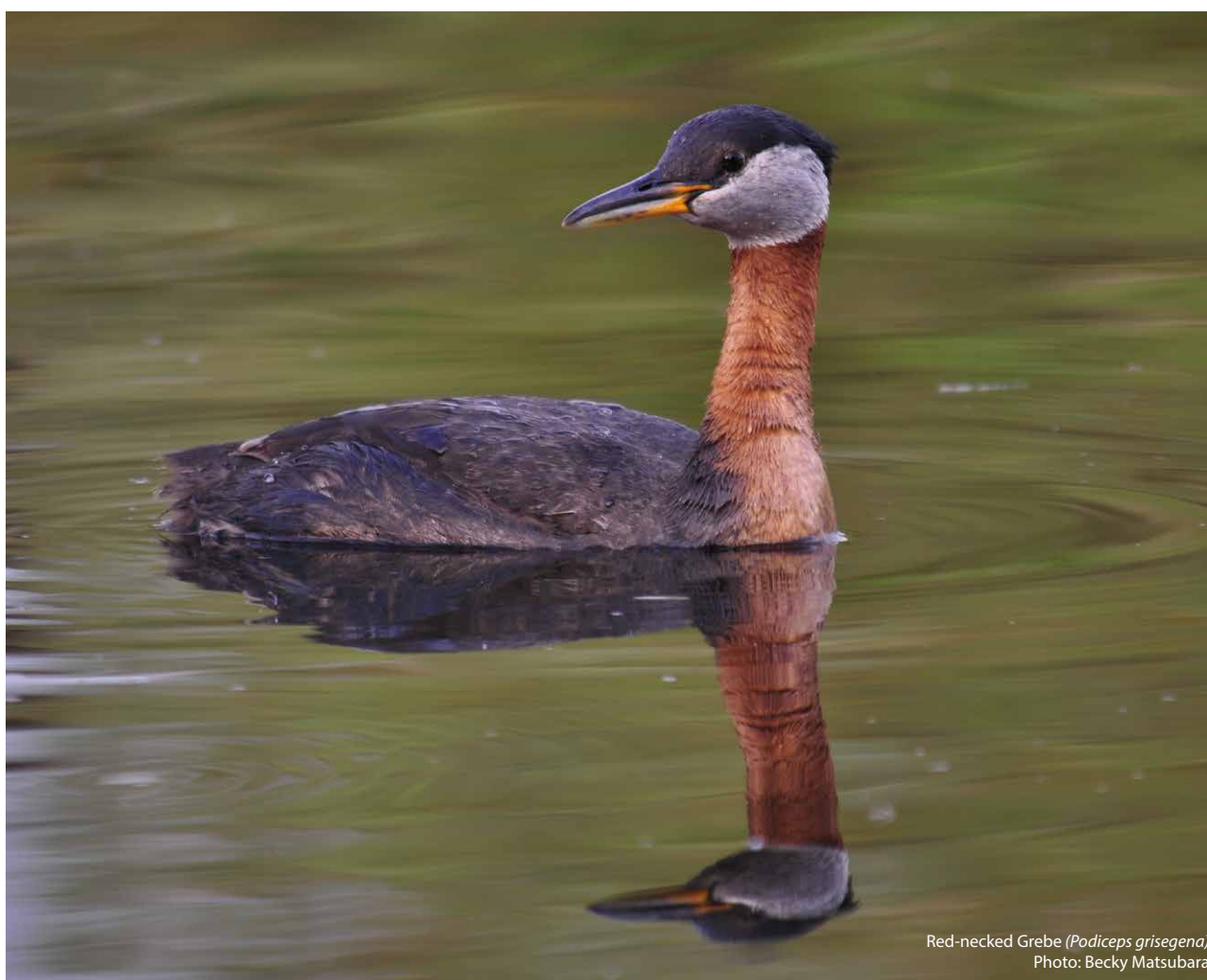
The European Red List of Birds is a review of the regional extinction risk of all species of birds occurring regularly and naturally in Europe. It is part of the IUCN Red List of Threatened Species, which aims to evaluate the extinction risk of each speciesTM, which then helps to inform decision making, the shaping of national and international environmental policies and on-the-ground conservation action. The IUCN Red List is used as a critical indicator of the health of the world's biodiversity. It is often used as a guide to revise the annexes of some important international agreements, such as the Convention on International Trade in Endangered Species (CITES) and the Convention on Migratory Species (CMS), or to measure the progress towards achieving international biodiversity and sustainable development goals (SDGs). Data from the IUCN Red List are also used to calculate the Red List Index (RLI), which is one of the biodiversity indicators used by the Convention on Biological Diversity (CBD). For instance, Milestone 2b, aims to ensure that "the increase in the extinction rate is halted or reversed, and the extinction risk is reduced by at least 10 percent, with a decrease in the proportion of species that are threatened, and the abundance and distribution of populations of species is enhanced or at least maintained".

² <https://ipbes.net/global-assessment>

³ Ferguson-Lees, J.; Christie, D.A. 2001. Raptors of the World. Christopher Helm, London.

Along with assessing the risk of species becoming globally extinct, it is also important to assess species' extinction risk at regional and national levels, where conservation policy is more often established and implemented. The European Red List of Birds is a regional Red List assessment initiated by BirdLife International in 1994. Since then, updates have been published in 2004 and 2015, with the 2021 update being the fourth one. The results of the European Red List of Birds are used to inform de-

cision-making across the region, set up biodiversity protection targets (e.g., at national level, or as part of the EU Biodiversity Strategies to 2020 and 2030), and identify priorities for further research and conservation (e.g., for threatened species). The European Red List of Birds is the baseline for assessing their conservation status as European Species of Conservation Concern (SPECs)⁴.



Red-necked Grebe (*Podiceps grisegena*)
Photo: Becky Matsubara

⁴ https://www.birdlife.org/sites/default/files/attachments/European%20Birds%20of%20Conservation%20Concern_Low.pdf

2. Methodology

2.1 Red List assessment process

The European Red List of Birds assessment follows the IUCN Red List Categories and Criteria (version 3.1, second edition)⁵ as well as the Guidelines for Using the IUCN Red List Categories and Criteria (version 14, August 2019)⁶. The extinction risk of a species can be assessed at global, regional or national levels. It

is quite common for a species to be listed in different Red List categories on the global IUCN Red List and a Regional Red List. For example, a species that is common worldwide and classified as Least Concern on the IUCN Red List may face a high level of threat in a specific region and therefore be listed as Endangered in that region (see Figure 1 for the explanation of the IUCN Red List Categories). To avoid under or overestimating a particular species, the Guidelines for Application of IUCN Red List Criteria at Regional and National Levels (version 4.0)⁷ are applied.



Common Redshank (*Tringa totanus*)
Photo: Britt-Marie Sohlström

⁵ <https://portals.iucn.org/library/node/10315>

⁶ <https://www.iucnredlist.org/resources/redlistguidelines>

⁷ <https://www.iucn.org/content/guidelines-application-iucn-red-list-criteria-regional-and-national-levels-version-40>

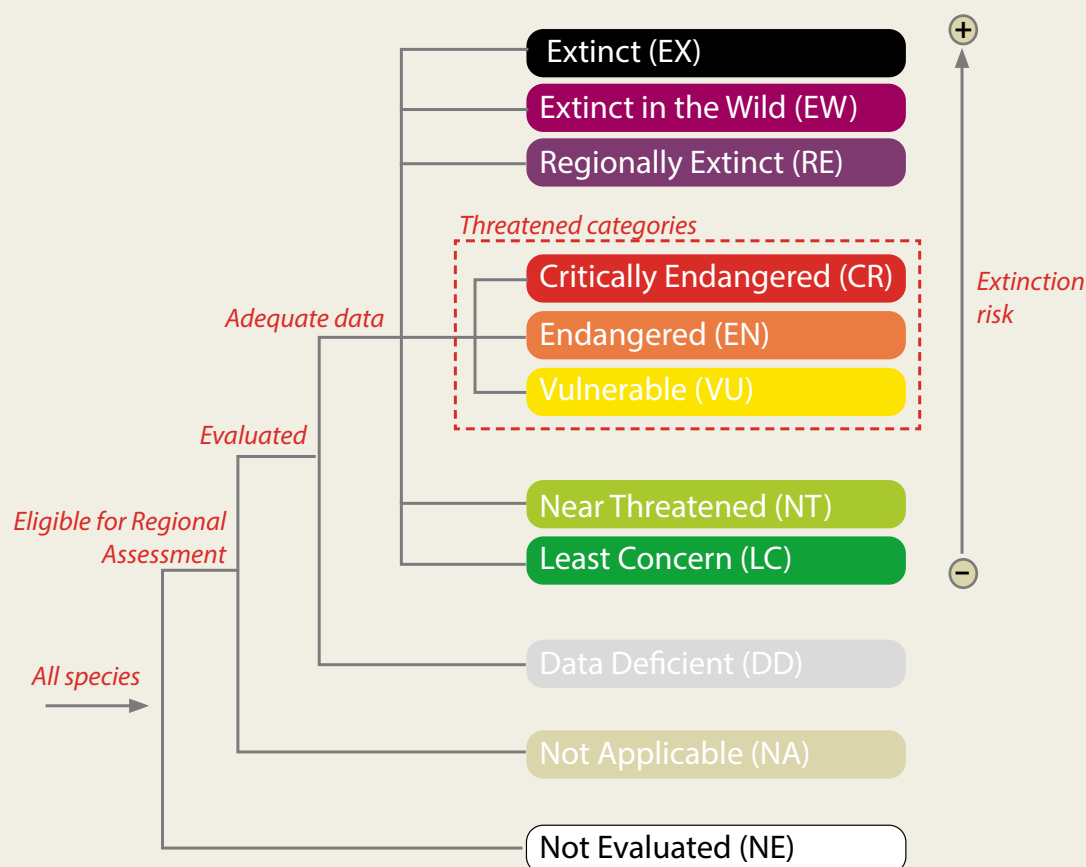


Figure 1. IUCN Red List Categories at a regional scale

The assessment is based on data reported by the 28 Member States of the European Union (EU)⁸ under Article 12 of the EU Birds Directive, as described in the State of Nature in the EU –Methodological paper⁹, as well as national reports from 22 countries and territories in Europe which are not part of the EU. The latter were collated by BirdLife International through national experts, coordinators of bird monitoring programmes and organisations, including BirdLife International Partners and many others. The reports were submitted in 2019-2020 and included information on the size and trend of populations and distributions of individual bird species. Additional sources such as scientific reports, national atlases and Red Data Books, as well as peer-reviewed literature were also used to make sure the most recent data available were considered.

The national data were combined to produce overall pan-European population sizes and trends for each species. For population sizes, the reported minimum and maximum population size data across countries were summed to calculate the overall

minimum and maximum value. In addition, the best estimate was used if provided, and if not, the geometric mean of each population size was calculated and used as a best estimate of population size where appropriate. All European countries were requested to use the same population unit, which was breeding pairs for most breeding birds, (except for a minority of taxa with unusual or complex breeding biology or cryptic behaviour, for which other units, such as calling or lekking males, were used), and individuals for birds in winter (non-breeding season). For population trends, data from all countries were combined, weighting each country's contribution according to the size of its population. Weightings were based on the best estimate provided or the geometric mean of the countries' minimum and maximum population size compared to the equivalent total for the overall European population. This analysis was carried out using a dedicated tool developed by IUCN to estimate overall trends based on data from multiple (national) subpopulations¹⁰.

⁸ As it stood in 2019, and therefore at the time, still comprising the UK (hereafter referred to as "the EU28", a level for which regional Red List assessments have also been previously undertaken in 2020 for native species that regularly occur within the region).

⁹ Röschel, L., Noebel, R., Stein, U., Naumann, S., Romão, C., Tryfon, E., Gaudillat, Z., Roscher, S., Moser, D., Ellmauer, T., Löhnertz, M., Halada, L., Staneva, A. and Rutherford, C. A. (2020). State of Nature in the EU - Methodological paper. Methodologies under the Nature Directives reporting 2013-2018 and analysis for the State of Nature 2000. ETC/BD report to the EEA.

¹⁰ <https://www.iucnredlist.org/resources/criterion-a>

A species' population size trend is measured over the length of time of three generations of that species and described as 'increasing' where the population size has expanded over three generations, 'decreasing' where the population size has undergone reduction, 'stable' where the population size has not experienced any significant changes or 'fluctuating' if the species experiences strong inter-annual changes in its population size. Where it was not possible to allocate a trend category with confidence, either because trend directions were reported as unknown for a large proportion of the total European population, in the case of conflicting trend information, or lack of trend magnitudes, the overall European trend was classified as 'unknown'.

Where possible, the robustness of trend categories to the effects of any missing data was tested using plausible 'good' and 'bad' scenarios, based on other sources of information, such as any other reported trend information, recent national Red Lists, scientific literature, and other publications and consultations with experts. In addition, attention was given to the quality of the reported trend information, e.g., where trends were derived from 'complete surveys or robust estimates' in the majority of a species' range countries; the overall calculated trend was considered of higher quality compared to trends based on 'extrapolation from limited amount of data', the latter being of higher quality than 'expert opinion'.

For most species, assessments were based on data from the breeding season, but in a small number of cases, winter data were also used. Winter data were only reported for a subset of species, mainly wintering waterbirds (especially migratory wildfowl and waders), whose populations are often best monitored in the winter when they congregate in large numbers. The assessments of species that do not breed (regularly) within Europe were based solely on winter data, while for species that occur in both seasons and for which the reported datasets were both representative of the regional population, the assessment process was carried out independently on data for both the breeding and wintering populations. For some species in winter, underlying population trends can be obscured by demographic factors, often related to inter-annual variation in weather conditions. In some years, for example, birds that usually winter in the region may be forced to move elsewhere by harsh winter conditions, whilst in others, birds that usually winter outside the region may show marked influxes into the region. Consequently, assessments were carried out principally based on breeding data, provided that the resulting status category was the same as or higher (i.e., more threatened) than that obtained using winter data. In cases where status categories were the same in both seasons, the final assessment was based on the season for which better quality data was available.

The species' trends in themselves at European level are also considered in the analyses in this report as they can reveal subtle changes in population sizes, such as slow deteriorations or stabilisations, before meeting a Red List category threshold. When used to study species in groups, such as species dependant on similar habitats, they can indicate a general deterioration of that habitat, implying the degradation of an ecosystem. Trends also provide an additional level or meaning to the Red List assessment of a species. For example, if a species is assessed as Vulnerable due to its rapidly declining trend, this can mean that although it has existed for millennia in this region, in a period of just three generations, at least a third of the species' population has been lost.

2.2 Geographic scope

The geographical scope is continent-wide and comprises 54 countries and territories across Europe, extending from Greenland (Denmark), Iceland and Svalbard (Norway) in the north to the Canary Islands (Spain), Malta and Cyprus in the south, and from the Azores (Portugal) in the west to the Caucasus and Ural Mountains in the east. Figure 2 shows the geographic area covered by the European Red List assessment.

2.3 Taxonomic scope

All terrestrial and marine bird species native to and/or naturally (and regularly) occurring in Europe are included in the assessment. Assessments were carried out at the species level only, following BirdLife International's current taxonomy (BirdLife International 2021), and population size and trend data reported by countries at subspecific or flyway population levels were aggregated to the species level.



The complete list of countries and territories covered by the European Red List of Birds is presented in Appendix 2.

Figure 2. Geographic area covered by the European Red List of Birds assessment.

3.

Results and discussion

3.1 Overview

3.1.1. Red List status of European birds

At the European regional level, 13% (71 species) of all 544 assessed bird species are threatened, with approximately 2% (8 species) Critically Endangered (CR), nearly 3% (15 species) Endangered (EN), and nearly 9% (48 species) Vulnerable (VU). A further 6% (34 species) are considered Near Threatened (NT) (Figure 3 shows the percentage of species in each IUCN Red List Category). This translates as one in five bird species in Europe being threatened or Near Threatened with extinction. By comparison, within the EU28 region, nearly 19% of bird species (86 species) are threatened, with 2% (10 species) Critically Endangered, 4.5% (21 species) Endangered, 12% (55 species) Vulnerable, and a further 8% (37 species) are Near Threatened¹¹. Therefore, in the EU28 region, over a quarter of bird species are threatened or Near Threatened.

Compared to the European Red List assessment in 2015¹² (when 533 species were assessed), the results appear very similar with 13% threatened species, 2% Critically Endangered, 3% Endangered species, and 7% Vulnerable species (see Section 3.2 for more details). The proportion of Near Threatened species has remained unchanged (6%).

Two species which used to occur in Europe are now globally Extinct; they were not assessed or counted in the statistics below as they disappeared much earlier than the current time period – these are the Canarian Oystercatcher (*Haematopus meadewaldoi*) and Great Auk (*Pinguinus impennis*). Five species are Regionally Extinct in Europe: Pallas's Sandgrouse (*Syrhaptes paradoxus*), Northern Bald Ibis¹³ (*Geronticus eremita*), African Darter (*Anhinga rufa*), Common Buttonquail (*Turnix sylvaticus*)

and Pine Bunting (*Emberiza leucocephalos*). New data has contributed to the re-assessment of two species previously classified as Regionally Extinct: the Caspian Plover (*Charadrius asiaticus*) and Desert Warbler (*Curruca nana*), which are now considered Endangered and Vulnerable, respectively. Another three species are Critically Endangered (Possibly Extinct): the Asian Houbara (*Chlamydotis macqueenii*), Slender-billed Curlew (*Numenius tenuirostris*) and Pechora Pipit (*Anthus gustavi*), with the latter being the latest addition to the list.

Amongst the most threatened (Critically Endangered) European birds is one wader species: the Sociable Lapwing (*Vanellus gregarius*); one seabird: the Balearic Shearwater (*Puffinus mauretanicus*); as well as the Steppe Eagle (*Aquila nipalensis*), Yellow-breasted Bunting (*Emberiza aureola*) and Red-knobbed Coot (*Fulica cristata*).

A fifth of Europe's birds (103 species) are endemic or near endemic to the region. Of these, almost a quarter (24 species) are threatened or Near Threatened, and over a quarter (28%) are declining, increasing and unknown, respectively, with the remaining species being stable or fluctuating. The most threatened endemic European species is the Balearic Shearwater (*Puffinus mauretanicus*) (Critically Endangered), followed by the Endangered endemic or near endemic species: the Atlantic Puffin (*Fratercula arctica*), the Gran Canaria Blue Chaffinch (*Fringilla polatzeki*), and Zino's Petrel (*Pterodroma madeira*).

¹¹ <https://nature-art12.eionet.europa.eu/article12/>

¹² http://datazone.birdlife.org/userfiles/file/Species/erlob/EuropeanRedListOfBirds_June2015.pdf

¹³ The Northern Bald Ibis does exist in Europe but only as partially captive, captive-bred and / or reintroduced populations, none of which are yet considered self-sustainable, hence its continued evaluation as RE.

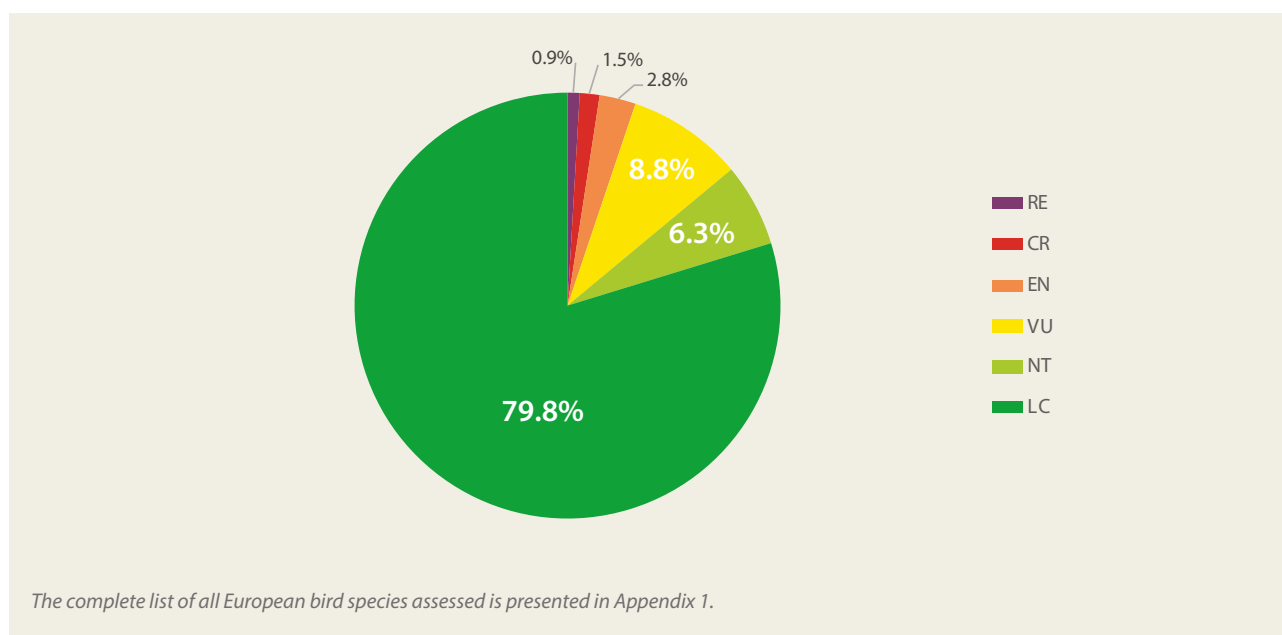


Figure 3. IUCN Red List status of birds in Europe.

3.1.2. Population trend of European birds

Overall, 30% of European birds have a decreasing population trend, 23% are stable or fluctuating, 21% are increasing, while 26% have an unknown trend (Fig. 4). By comparison, at EU28 level, the proportion of species with a decreasing trend

is the same (30%), the proportion of species with a stable or fluctuating trend is higher (30%), those with an increasing trend is of a similar proportion (23%), while the proportion of species with an unknown trend is significantly lower (17%)¹⁴.

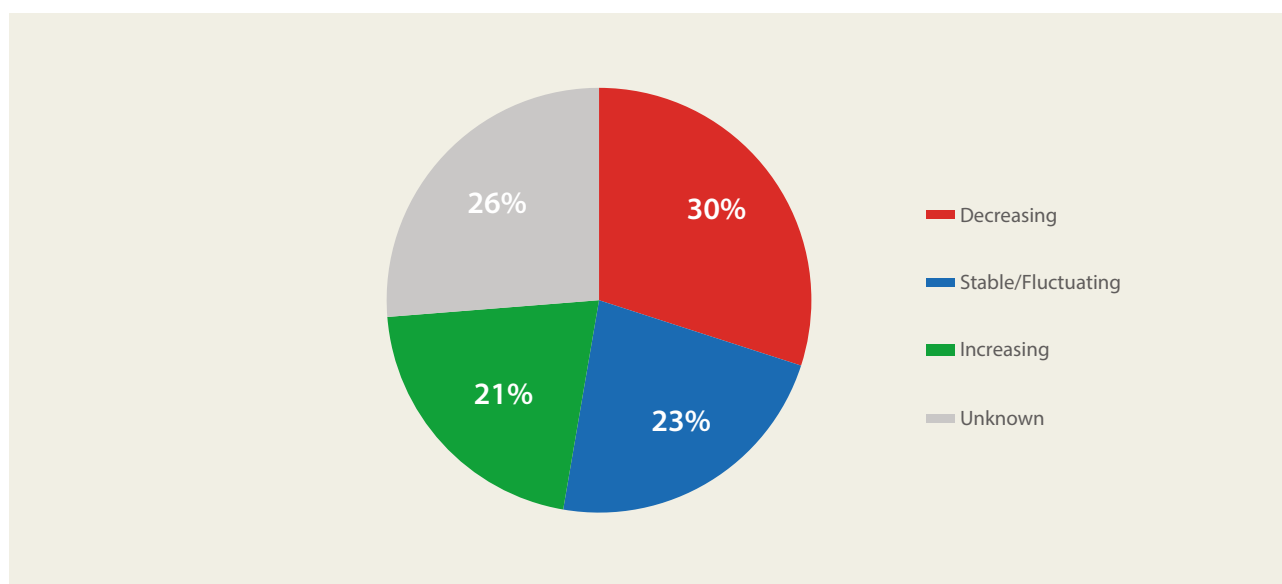


Figure 4. Population trends of birds in Europe

¹⁴ <https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020>

3.2 European bird species changing Red List category

In total, 84 species have changed Red List status at European level since the previous assessment in 2015¹⁵ (Table 1), mostly by one category but occasionally by more. Among these, 37 species are now classified in a higher extinction risk category. Most of these cases are due to genuine declines in species populations. An example is the Demoiselle Crane (*Anthropoides virgo*), where new data from across its European range (mainly Russia and Ukraine) show genuine declines at a rate of over 50%, warranting a reclassification from Least Concern in 2015 to Endangered. The remaining 47 species have been reclassified in lower Red List categories. Although new data suggest they face a lower level of extinction risk compared to 2015, half of these species are still undergoing (slow) population declines. An example is the Common Kingfisher (*Alcedo atthis*), which is now considered Least Concern (it was Vulnerable in 2015) (see Box 1).

The change between categories in roughly one out of ten (of the 84) species is considered to result from changes in the methodology of field data collection, calculation of trend values, or previous under- or overestimation of population size (i.e., non-genuine changes). Updated estimates of species' generation lengths¹⁶ have also affected the final assessment of certain species; e.g. long-lived species for which trends were calculated over a significantly shorter or longer 3-generation period. The re-assessment of the Northern Fulmar (*Fulmarus glacialis*) is an example of such a non-genuine change in category, where the use of the new generation length value has resulted in its status now being assessed as Vulnerable (rather than Endangered).

The improvement of status in some species reflects a genuine population increase due to targeted conservation action, for instance, with the Red Kite (*Milvus milvus*) being downlisted from Near Threatened to Least Concern, and the Bearded Vulture (*Gypaetus barbatus*) being downlisted from Vulnerable to Near Threatened. It also underlines the importance of such actions being continued in the long term, until the threats to the species have ceased and the populations in the region are no longer conservation dependent. For example, the White-headed Duck (*Oxyura leucocephala*) was previously Endangered in Europe. Thanks to long-term conservation action taking place and the elaboration and implementation of an international Species Action Plan (SAP) limiting the reduction and degradation of its habitat, the pressure of hunting, and the risk of hybridisation with the non-native Ruddy Duck (*Oxyura jamaicensis*); its rate of decline has now reduced to the point where it no longer meets the thresholds for qualifying as Endangered, and is now classified as Vulnerable. In the case of the Egyptian Vulture (*Neophron percnopterus*) though, reclassified as Vulnerable from Endangered (based on the lower rate of decline mainly in its Iberian population), there is still a long way to go; legal protection and on-the-ground conservation action need to be further implemented at national level and across borders, both within its breeding and wintering grounds and along migration routes. Underlying this further is the Saker Falcon (*Falco cherrug*) which, after decades of successful population restoration in its core European range, is again experiencing recent overall population declines that have resulted in its status being reassessed as Endangered (from Vulnerable).

¹⁵ <http://datazone.birdlife.org/info/euroredlist>

¹⁶ Bird, J. P., Martin, R., Akçakaya, H. R., Gilroy, J., Burfield, I. J., Garnett, S. G., Symes, A., Taylor, J., Şekercioğlu, Ç. H. and Butchart, S. H. M. (2020). Generation lengths of the world's birds and their implications for extinction risk. *Conservation Biology* 34(5): 1252-1261. DOI: 10.1111/cobi.13486.

Table 1. Species whose Red List categories have changed in 2021 (shown in taxonomic order). On page 19, species whose reassessment has placed them in a higher risk Red List category; on pages 20 and 21, species whose reassessment has placed them in a lower risk Red List category.

SCIENTIFIC NAME BY TAXONOMIC ORDER	ENGLISH NAME	2021 EUROPEAN RED LIST CATEGORY	2015 EUROPEAN RED LIST CATEGORY
<i>Branta ruficollis</i>	Red-breasted Goose	VU	NT
<i>Anas acuta</i>	Northern Pintail	VU	LC
<i>Aythya fuligula</i>	Tufted Duck	NT	LC
<i>Somateria mollissima</i>	Common Eider	EN	VU
<i>Lyrurus mlokosiewiczi</i>	Caucasian Grouse	NT	LC
<i>Alectoris rufa</i>	Red-legged Partridge	NT	LC
<i>Ammoperdix griseogularis</i>	See-see Partridge	VU	LC
<i>Coturnix coturnix</i>	Common Quail	NT	LC
<i>Turnix sylvaticus</i>	Common Buttonquail	RE	CR
<i>Podiceps grisegena</i>	Red-necked Grebe	VU	LC
<i>Podiceps nigricollis</i>	Black-necked Grebe	VU	LC
<i>Hydrobates leucorhous</i>	Leach's Storm-petrel	NT	LC
<i>Puffinus yelkouan</i>	Yelkouan Shearwater	VU	LC
<i>Falco cherrug</i>	Saker Falcon	EN	VU
<i>Falco columbarius</i>	Merlin	VU	LC
<i>Falco vespertinus</i>	Red-footed Falcon	VU	NT
<i>Fulica cristata</i>	Red-knobbed Coot	CR	EN
<i>Anthropoides virgo</i>	Demoiselle Crane	EN	LC
<i>Chlamydotis undulata</i>	African Houbara	VU	NT
<i>Calidris falcinellus</i>	Broad-billed Sandpiper	VU	LC
<i>Calidris pugnax</i>	Ruff	NT	LC
<i>Gallinago gallinago</i>	Common Snipe	VU	LC
<i>Tringa totanus</i>	Common Redshank	VU	LC
<i>Stercorarius parasiticus</i>	Arctic Jaeger	EN	LC
<i>Larus audouinii</i>	Audouin's Gull	VU	LC
<i>Larus genei</i>	Slender-billed Gull	VU	LC
<i>Pagophila eburnea</i>	Ivory Gull	VU	LC
<i>Syrhaptes paradoxus</i>	Pallas's Sandgrouse	RE	EN
<i>Clamator glandarius</i>	Great Spotted Cuckoo	VU	LC
<i>Caprimulgus ruficollis</i>	Red-necked Nightjar	NT	LC
<i>Apus apus</i>	Common Swift	NT	LC
<i>Anthus gustavi</i>	Pechora Pipit	CR	VU
<i>Phoenicurus erythrogaster</i>	White-winged Redstart	NT	LC
<i>Cyanistes cyanus</i>	Azure Tit	NT	LC
<i>Lanius senator</i>	Woodchat Shrike	NT	LC
<i>Corvus frugilegus</i>	Rook	VU	LC
<i>Emberiza leucocephalos</i>	Pine Bunting	RE	VU

SCIENTIFIC NAME BY TAXONOMIC ORDER	ENGLISH NAME	2021 EUROPEAN RED LIST CATEGORY	2015 EUROPEAN RED LIST CATEGORY
<i>Cygnus columbianus</i>	Tundra Swan	VU	EN
<i>Anser erythropus</i>	Lesser White-fronted Goose	VU	EN
<i>Aythya marila</i>	Greater Scaup	LC	VU
<i>Clangula hyemalis</i>	Long-tailed Duck	LC	VU
<i>Oxyura leucocephala</i>	White-headed Duck	VU	EN
<i>Lagopus lagopus</i>	Willow Grouse	LC	VU
<i>Lagopus muta</i>	Rock Ptarmigan	LC	NT
<i>Alectoris chukar</i>	Chukar	LC	NT
<i>Gavia immer</i>	Common Loon	LC	VU
<i>Fulmarus glacialis</i>	Northern Fulmar	VU	EN
<i>Gypaetus barbatus</i>	Bearded Vulture	NT	VU
<i>Neophron percnopterus</i>	Egyptian Vulture	VU	EN
<i>Aquila fasciata</i>	Bonelli's Eagle	LC	NT
<i>Clanga clanga</i>	Greater Spotted Eagle	VU	EN
<i>Milvus milvus</i>	Red Kite	LC	NT
<i>Circus cyaneus</i>	Hen Harrier	LC	NT
<i>Circus macrourus</i>	Pallid Harrier	LC	NT
<i>Accipiter badius</i>	Shikra	NT	VU
<i>Falco biarmicus</i>	Lanner Falcon	NT	EN
<i>Charadrius asiaticus</i>	Caspian Plover	EN	RE
<i>Charadrius leschenaultii</i>	Greater Sandplover	NT	VU
<i>Glareola nordmanni</i>	Black-winged Pratincole	LC	VU
<i>Limosa limosa</i>	Black-tailed Godwit	NT	VU
<i>Numenius arquata</i>	Eurasian Curlew	NT	VU
<i>Hydrocoloeus minutus</i>	Little Gull	LC	NT
<i>Larus argentatus</i>	European Herring Gull	LC	NT
<i>Larus armenicus</i>	Armenian Gull	LC	NT
<i>Alca torda</i>	Razorbill	LC	NT
<i>Uria aalge</i>	Common Murre	LC	NT
<i>Ketupa zeylonensis</i>	Brown Fish-owl	EN	CR
<i>Apus affinis</i>	Little Swift	NT	VU
<i>Alcedo atthis</i>	Common Kingfisher	LC	VU
<i>Ceryle rudis</i>	Pied Kingfisher	VU	EN
<i>Picus sharpei</i>	Iberian Green Woodpecker	LC	NT
<i>Ammomanes deserti</i>	Desert Lark	EN	CR
<i>Melanocorypha yeltoniensis</i>	Black Lark	EN	CR
<i>Anthus pratensis</i>	Meadow Pipit	LC	NT

SCIENTIFIC NAME BY TAXONOMIC ORDER	ENGLISH NAME	2021 EUROPEAN RED LIST CATEGORY	2015 EUROPEAN RED LIST CATEGORY
<i>Prunella montanella</i>	Siberian Accentor	LC	NT
<i>Oenanthe chrysopygia</i>	Red-tailed Wheatear	VU	EN
<i>Oenanthe leucura</i>	Black Wheatear	LC	VU
<i>Turdus iliacus</i>	Redwing	LC	NT
<i>Curruca nana</i>	Asian Desert Warbler	VU	RE
<i>Lanius excubitor</i>	Great Grey Shrike	LC	VU
<i>Passer moabiticus</i>	Dead Sea Sparrow	LC	VU
<i>Pyrhula murina</i>	Azores Bullfinch	VU	EN
<i>Emberiza cineracea</i>	Cinereous Bunting	NT	VU
<i>Emberiza rustica</i>	Rustic Bunting	LC	VU

Box 1. Species with significant change in their Red List status



Kingfisher *Alcedo atthis*

VU

LC

This species' trend varies between countries in its range, with many reporting an unknown direction. Based on the latest data available, this species' trend appears to still be decreasing, but at a lower rate than in 2015, and not sufficiently rapidly to meet a higher category than Least Concern. This highlights the importance of regular species monitoring, as if new data were gathered on the trends which are currently unknown, this could paint a more accurate picture of the state of the species within the region.



Greater Spotted Eagle *Clanga clanga*

EN

VU

A non-genuine change in the European Red List status due to change in generation length from 50 to 28 years (for 3 generations). Furthermore, the overall declining trend is dictated by a 30-49% population reduction within the European part of Russia (which holds 82% of the European population).



Black-tailed Godwit *Limosa limosa*

VU

NT

A reportedly genuine increase in the breeding population in Iceland (which holds approximately 47% of the European population), likely due to increasing spring temperature¹⁷, dictates the overall stable European trend. However, the species is undergoing rapid declines in other key range countries like the Netherlands and Russia (together holding another 45% of the European population), despite recent reports of northward expansion of the species in Northwest Russia¹⁸. This species depends on wet grasslands during the breeding season, and therefore habitat loss and degradation in breeding grounds is a key threat to it, according to the breeding waders Multi-Species Action Plan (MSAP)¹⁹. Despite the stabilisation of the overall population, this threat has not yet been halted.

¹⁷ Effects of spring temperature and volcanic eruptions on wider productivity. Tómas Gréтар Gunnarsson, Lilja Jóhannesdóttir, José A Alves, Böðvar Þórisson & Jennifer A Gill. IBIS (2017). DOI: 10.1111/ibi.12449

¹⁸ Popov I. & Starikov D. 2015. Recent northward expansion of breeding Black-tailed Godwits *Limosa limosa* in NW Russia. Wader Study 122(3): 173–183.

¹⁹ Leyrer, J., Brown, D., Gerritsen, G., Hötker, H. and Ottvall, R. (compilers). (2018). International Multispecies Action Plan for the Conservation of Breeding Waders in Wet Grassland Habitats in Europe (2018-2028). Report of Action A13 under the framework of Project LIFE EuroSAP (LIFE14 PRE/UK/002). NABU, RSPB, VBN and SOF.



Eurasian Curlew *Numenius arquata*

VU

NT

Although the species has been re-classified under a lower extinction risk category, its overall trend is still decreasing (by 25-29%). The species seems to be doing well in Finland (which holds 37% of the European population), however, in the European part of Russia (holding 29% of the population) and in the UK (holding 25% of the population), its population is still decreasing rapidly. Overall, in Europe, this species is thought to be mostly suffering from the impact of habitat loss and degradation



Common Snipe *Gallinago gallinago*

LC

VU

A genuine change in the main range country in Europe, Russia (holding 65% of the population) drives an overall decrease in the population trend by 36%. This species is declining globally too. The highest impacting threat known for this species is habitat loss and degradation in breeding grounds, which is likely to be driving the declining trend. This species is dependent on wet grassland in the breeding season, and therefore their trends are very much determined by the extent and condition of these habitats in Europe.



Common Redshank *Tringa totanus*

LC

VU

This species is undergoing an overall decline (of over 30% in 3 generations), dictated by decreasing trends in the 3 main range countries (holding circa 50% of the European population): Iceland²⁰, Russia and Belarus. The overall trend for this species is also supported by the Pan-European Common Bird Monitoring Scheme (PECBMS)²¹. As with the Common Snipe, and as per the breeding waders MSAP, this species is highly dependent on wet grasslands and consequently its highest impacting threat is habitat loss and degradation, which is likely to be driving the declining trend.



Northern Pintail *Anas acuta*

LC

VU

A reportedly genuine decline in the European Russian population, as well as in the Finnish and Swedish populations (representing practically the entire European population) result in an overall decline of 38% in three generations. This species is threatened by habitat loss and modification (wetland and coastal habitats) in both its breeding and wintering grounds²², which is likely to be the main driver of its current decline.

²⁰ <https://en.ni.is/biota/animalia/chordata/aves/charadriiformes/stelkur-tringa-totanus>

²¹ <https://pecbms.info/>

²² Scott, D. A.; Rose, P. M. (1996). Atlas of Anatidae populations in Africa and western Eurasia. Wetlands International, Wageningen, Netherlands.



Common Eider *Somateria mollissima*

VU

EN

It is expected this species will have declined by over 50% in three generations (by 2033) based on reported decreasing trends from across its European range, i.e. Iceland, Finland, Norway and Greenland (which together hold almost three quarters of the European population). The rapid population declines in the Baltic-Wadden Sea after the 2000s are considered to be due a combination of factors, including a decreased survival due to natural predation, diseases and food shortage.²³



Rook *Corvus frugilegus*

LC

VU

Approximately half of the species' population is experiencing declines. These include countries like Russia, Poland, France and the Netherlands. Some countries have explicitly reported a genuine change in the species' population size, including the European part of Russia (which holds almost a third of the European population). Overall, the population size of the Rook is declining by over 30% in Europe, likely due to the persecution and destruction of nesting sites.



Common Quail *Coturnix coturnix*

LC

NT

The species population in Europe is decreasing by at least 25%, with genuine declines reported by two key range countries – Russia and Spain. The main reasons for decline are considered to be the loss of rough grassland and uncultivated land due to agricultural intensification, which has diminished food availability such as wild plants, seeds and insects; with hunting also playing a significant role.²⁴



Red-necked Grebe *Podiceps grisegena*

LC

VU

The overall population decline by 38% is considered genuine and is observed in most of the key range countries, including Russia and Finland (which hold together over half the European population). Despite improved knowledge about the species population in some range countries, little is known about the reasons for change.



Black-necked Grebe *Podiceps nigricollis*

LC

VU

An overall genuine decline by 35% was calculated based on declining trends from Russia and Ukraine (which together hold about 70% of the European population). Little is known about the main reasons of the decline, although water pollution from agricultural activities and urban run-off, decreases in precipitation due to climate change, the construction of flood protection infrastructure, disturbance from human recreational activities and bycatch may all be contributing factors.²⁵

²³ Keller, V., Herrando, S., Voříšek, P., Franch, M., Kipson, M., Milanese, P., Martí, D., Anton, M., Klvaňová, A., Kalyakin, M.V., Bauer, H.-G. and Foppen, R.P.B. (2020). *European Breeding Bird Atlas 2: Distribution, Abundance and Change*. European Bird Census Council & Lynx Edicions, Barcelona.

²⁴ Heath, M. and Tucker, G. (1994). Birds in Europe. World Birdwatch 16: 9-13.

²⁵ Pressures and threats data reported as part of the EU Birds Directive Article 12 reporting exercise 2013-2018 <https://cdr.eionet.europa.eu/>

In addition, 13 species have been assessed for first time (see Table 2), mainly due to taxonomic changes since 2015. Examples are the newly recognised Cyprus Scops-owl (*Otus cyprius*) (Least Concern) and the Italian Sparrow (*Passer italiae*) (Vulnerable).

Table 2. Species assessed at European level for the first time (shown in taxonomic order).

SCIENTIFIC NAME	ENGLISH NAME	2021 RED LIST STATUS
<i>Gallinago megala</i>	Swinhoe's Snipe	NT
<i>Onychoprion fuscatus</i>	Sooty Tern	VU
<i>Otus cyprius</i>	Cyprus Scops-owl	LC
<i>Phylloscopus nitidus</i>	Green Warbler	LC
<i>Phylloscopus orientalis</i>	Eastern Orphean Warbler	LC
<i>Curruca balearica</i>	Balearic Warbler	LC
<i>Curruca crassirostris</i>	Eastern Bonelli's Warbler	LC
<i>Curruca subalpina</i>	Moltoni's Warbler	LC
<i>Cyanistes teneriffae</i>	African Blue Tit	LC
<i>Poecile hyrcanus</i>	Caspian Tit	LC
<i>Lanius meridionalis</i>	Iberian Grey Shrike	VU
<i>Passer italiae</i>	Italian Sparrow	VU
<i>Fringilla polatzeki</i>	Gran Canaria Blue Chaffinch	EN

3.3 Status and trends of European birds by taxonomic and functional group

There are 73 bird families occurring in Europe and there are considerable differences amongst them, both in the number of species they include and their threatened status. When merging families into taxonomic or functional groups, amongst those comprising the most species; seabirds, wildfowl, waders, and raptors have highest proportion of threatened and Near Threatened species. When looking at trends, over 40% of wildfowl and wader species, over 30% of seabirds, as well as 25% of raptors, are experiencing population declines. Worryingly, deterioration in trend is observed amongst the most widespread and numerous group of birds, the passerines,

with one in four species in this group having a decreasing population trend. Among these, larks, shrikes and buntings, as well as pipits, chats, flycatchers, finches, tits and sparrows, contain relatively high numbers of species with decreasing trends (Fig. 5).

Less speciose taxonomic groups also show significant population declines, e.g. kingfishers (all 3 species), bustards (3 out of 4 species), rails and crakes (5 out of 9 species), grebes (3 out of 5 species) and grouse, partridges and pheasants (7 out of 17 species).

A comparison between passerines, terrestrial non-passerines and species dependent on the marine habitat during most of their life cycle shows that passerines and marine species have a higher proportion of species with unknown trends (Fig. 6).

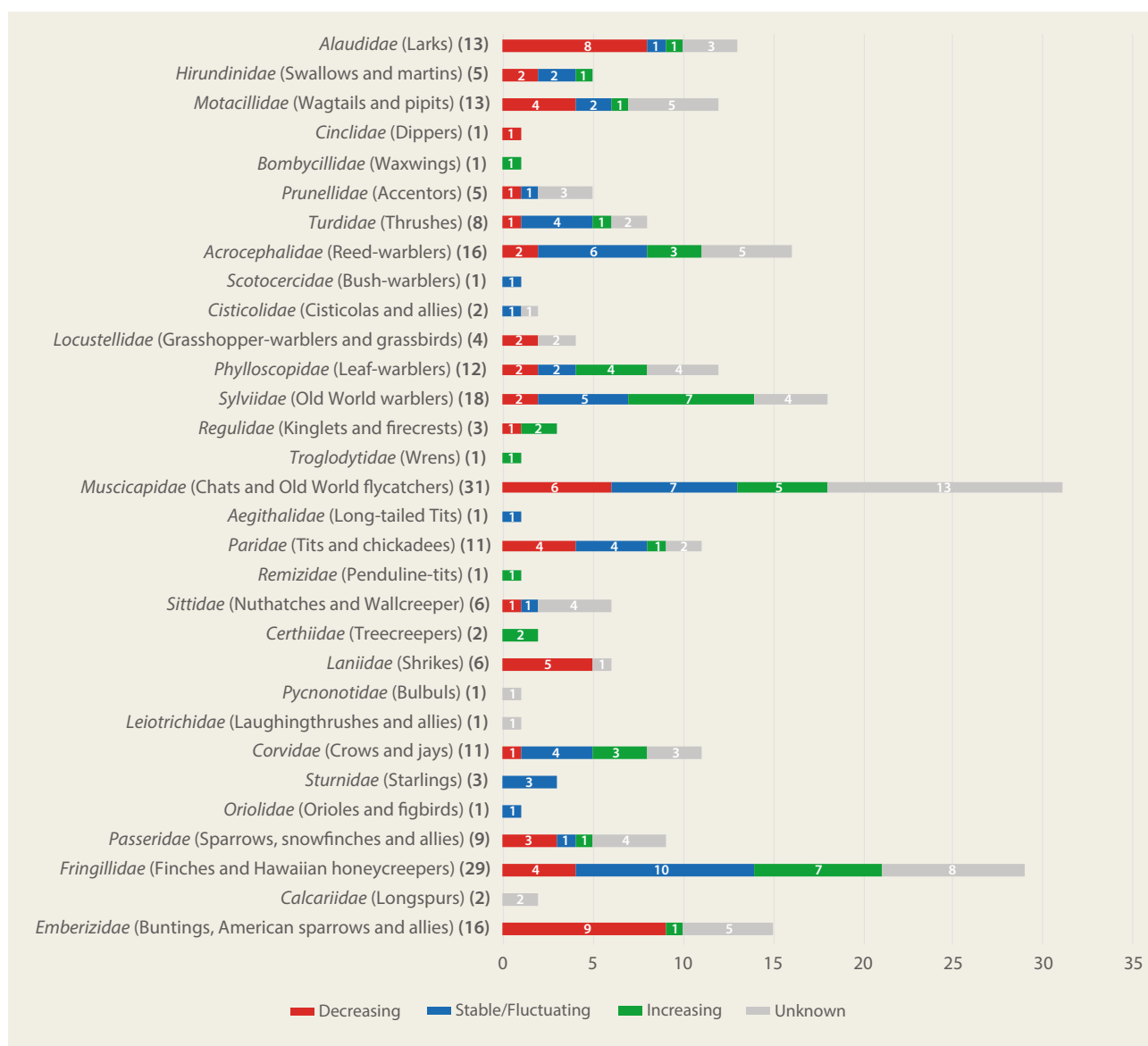


Figure 5. Population trend of passerine birds by family (in brackets, total number of species per family, in graph, number of species per trend direction).

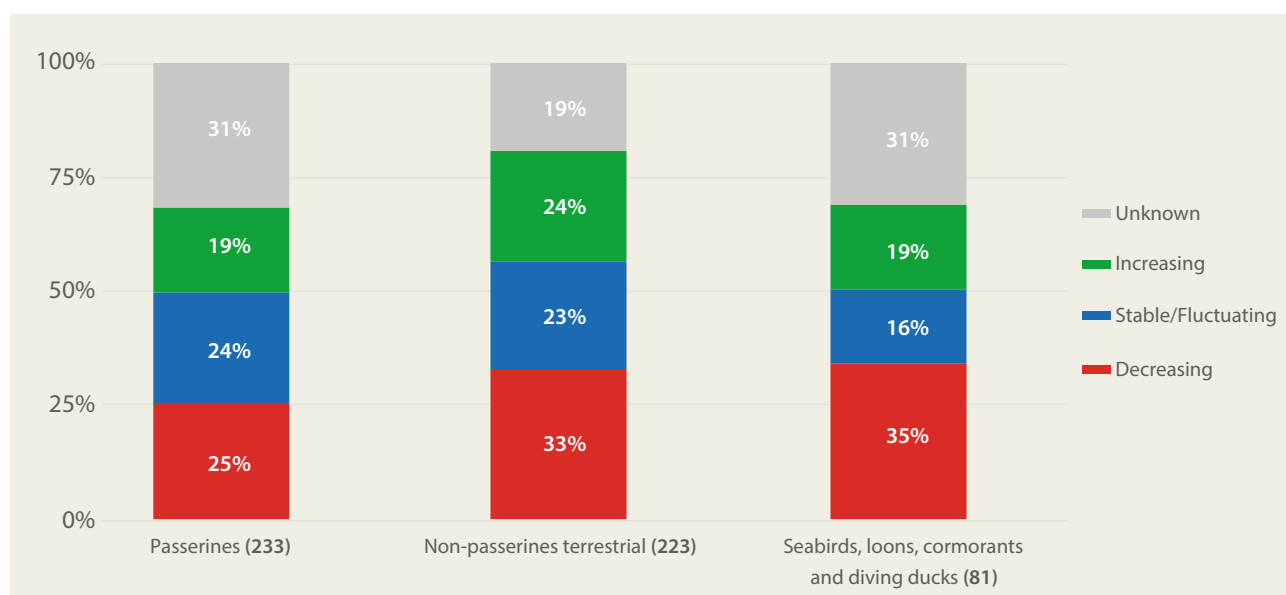


Figure 6. Differences in proportion of species trends between passerines, non-passerines (excl. seabirds, diving ducks, loons and cormorants) and non-passerines associated with the marine environment (seabirds, diving ducks, loons and cormorants). In brackets, number of species per group, in graph, proportion of trend direction per group.

A relatively higher proportion of declining trends are observed among migratory birds (more than 30%) compared to resident species (20%) (see Fig. 7). Moreover, among 121 species considered sub-Saharan migrants²⁶, 33% have declining trends, while among species that are migratory but do not migrate as far as to sub-Saharan Africa; 31.5% have declining trends.

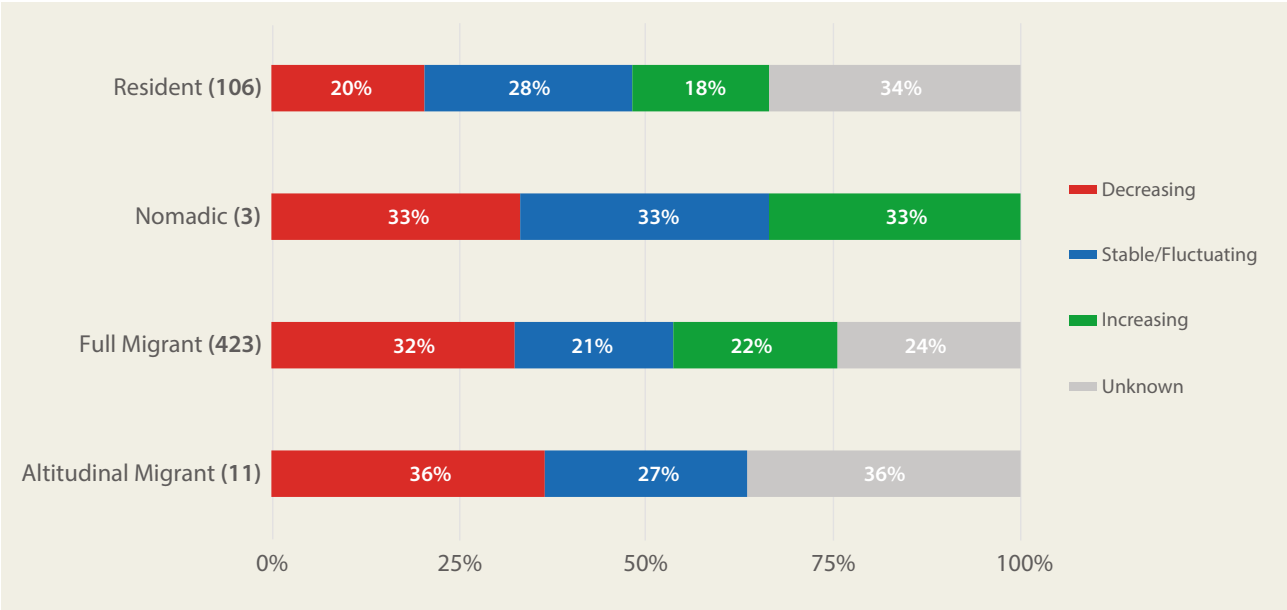


Figure 7. Trend directions in relation to migrating behaviour (in brackets, total number of species per group, in graph, proportion of species per trend direction).

3.4 Status and trends of European birds by main type of habitat

A comparison between main habitat types in Europe shows that farmland and grassland habitats have the highest number of associated threatened and Near Threatened species (33 species) of all habitat types, and are closely followed by marine habitat types (28 species), and inland wetlands next, with 13 species (Fig. 8).

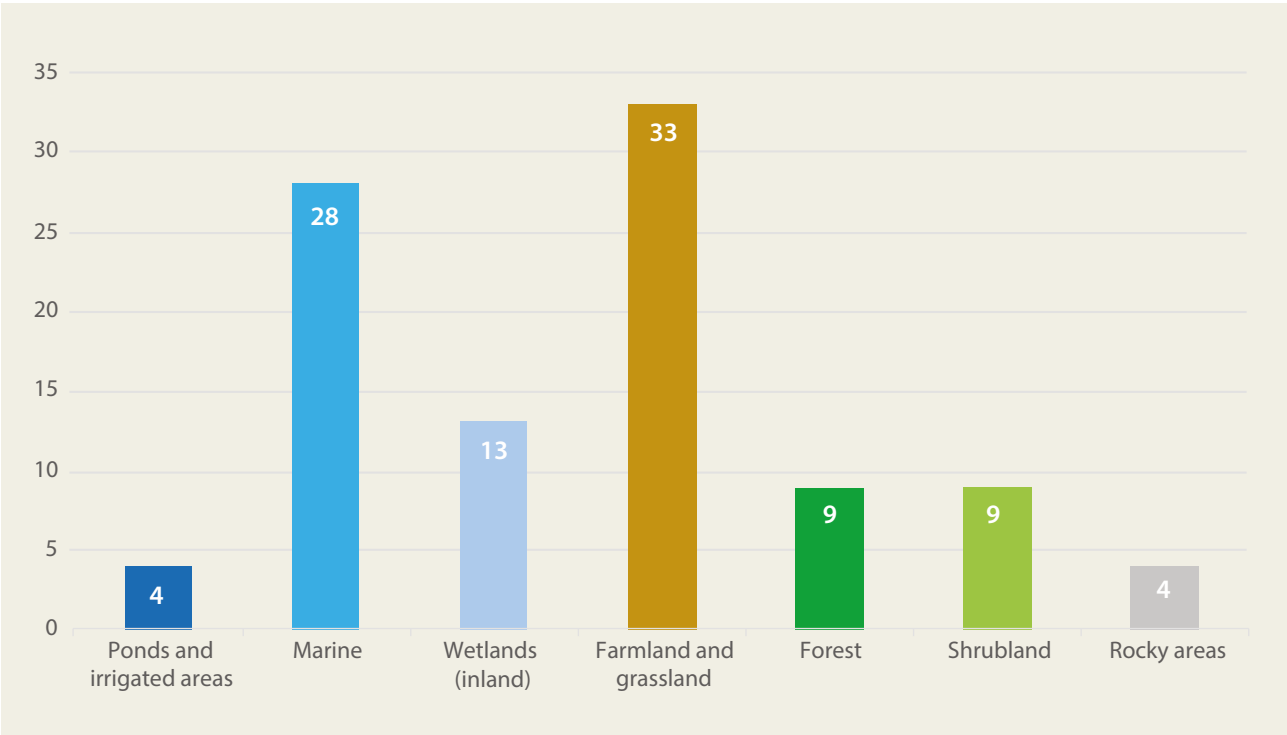


Figure 8. Number of threatened and Near Threatened species per main type of habitat in Europe.

²⁶ Vickery, J.A., Ewing, S.R., Smith, K.W., Pain, D.J., Bairlein, F., Škorpiľová, J. and Gregory, R.D. (2014). The decline of Afro-Palaeartic migrants and an assessment of potential causes. *Ibis*, 156(1), pp.1-22. <https://onlinelibrary.wiley.com/doi/full/10.1111/ibi.12118>

The picture looks similar when comparing the proportion of species with different population trend directions by habitat type (Fig. 9), where at least a third of species associated with farmland and grassland (55 out of 158 species), wetlands (24 out of 70 species) and marine habitats (30 out of 92 species) have a decreasing trend. Marine and freshwater aquaculture, artificial ponds, irrigated land and wastewater areas appear to have the highest proportion of species with a decreasing trend (over 45%), however a relatively small number of species (19) are associated with this type of habitat.

At the same time, another circa 40% of all species associated with marine habitats and wetlands have a stable or increasing trend. However, the proportion of species with an increasing trend is the smallest compared to all other habitat types (excluding rocky areas where only one species falls within this category).

Over a quarter of all species associated with forest habitats have decreasing trends (22 out of 80 species), although this habitat type also has the highest proportion of stable (25%) and increasing (25%) trends, with the rest being unknown. Similarly, approximately 50% of all species associated with shrubland have either stable or increasing trends.

Rocky habitats like inland cliffs and mountain peaks have the highest proportion of species with unknown trends (more than 50%). A third of all species associated with marine habitats and shrubland also have an unknown trend. The smallest proportion of species with unknown trends is associated with artificial aquatic habitats (less than 20%), farmland and grassland, and forest habitats (circa 20% each).

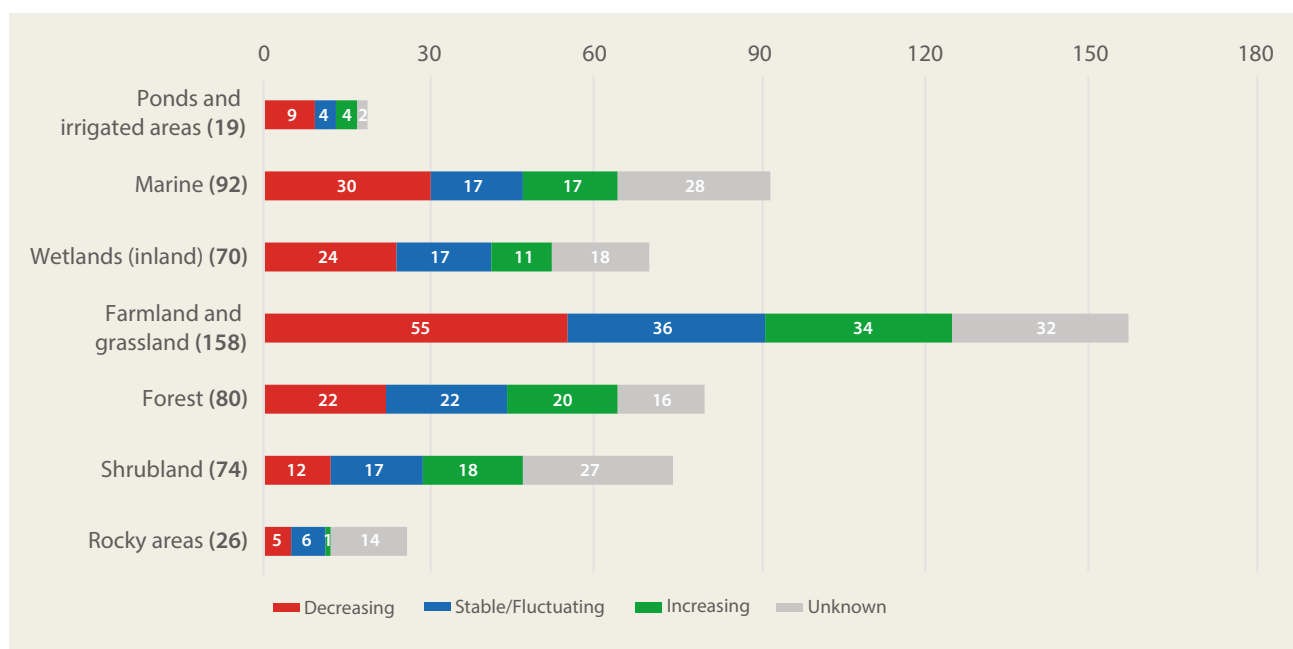


Figure 9. Population trend by main type of habitat in Europe (in brackets, total number of species per group, in graph, number of species per trend direction).

The results confirm the overall conclusions observed in other studies, such as the State of Nature in the EU 2013-2018 or the IPBES 2019. Large scale land use changes and the intensification of agricultural practices, the development of infrastructure, the overexploitation of marine resources, the pollution of inland waters and unsustainable yet commonly used forestry practices are the main drivers of bird population declines observed in European habitats. The Pan-European Common Bird Monitoring Scheme indicates a 57% decline in common farmland birds between 1980 and 2018²⁷. Ongoing population declines and range contractions in widespread species of open habitats – like larks, shrikes and buntings – clearly demonstrate the impact of disappearing mosaic landscapes and the increased use of agricultural chemicals (see Box 2 and Fig. 6). Although some raptor species have made recent population

recoveries due to legal protection and targeted conservation activities²⁸, many raptor species dependent on open habitats (e.g., grassland and shrubland) for prey are still in decline. In the marine environment, birds suffer from bycatch and incidental killing (due to fishing and hunting activities), as well as from the impact of invasive non-native species, disturbance and water pollution (originating from both land and sea).

Many species of birds are legally hunted across Europe. While hunting is prohibited in the EU during the breeding season, this method of exploitation is a threat to at least 82 species listed in Annex II of the Birds Directive²⁹ during their migration or in winter. Additionally, some species fall under the so-called EU derogations, where countries are permitted to cull part of the population under defined conditions. Species like the Rook

²⁷ https://pecbms.info/trends-and-indicators/indicators/indicators/E_C_Fa/

²⁸ <https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020>

²⁹ https://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm

(*Corvus frugilegus*) have suffered massive population declines, likely due to permitted persecution³⁰ (killing, destruction of nests and roosting sites) across most of its range, which has resulted in its current re-assessment as Vulnerable. Illegal killing

is another major threat to European birds, with more than 25 million birds illegally slaughtered in the Mediterranean region each year³¹.

Box 2. Specialists of open habitats: larks, shrikes and buntings



Woodchat Shrike (*Lanius senator*)
Photo: Juan Emilio

The 2021 Red List assessment of European birds shows that more species of open habitats, like larks, shrikes and buntings, experience population decline compared to the previous update (2015).

Of the 6 species of shrikes in Europe, 5 have a decreasing Red List trend, which has resulted in one species classified as Vulnerable (Iberian Grey Shrike (*Lanius meridionalis*)) and one as Near Threatened (Woodchat Shrike (*Lanius senator*)).

Shrikes prefer open small-scale (mosaic) landscapes, usually with scattered trees or shrubs, and have adapted (to a different degree) to low-intensity cultivated areas like farmland and grassland. Land use changes and the intensification of agricultural practices have led to the loss of areas of natural vegetation and field margins, as well as a massive decline in the abundance of large insects³². Land abandonment resulting in natural succession processes have been identified as another driver for disappearing breeding habitats for shrikes in some parts of the European continent. Climatic factors are expected to significantly influence shifts in population distribution and abundance in Red-backed Shrike (*Lanius collurio*) and Masked Shrike (*Lanius nubicus*).

Two thirds of all 13 lark species occurring in Europe and more than half of the 16 species of buntings also have decreasing population trends. The populations of two widespread lark species, the Eurasian Skylark (*Alauda arvensis*) and Calandra Lark (*Melanocorypha calandra*), as well as the Yellowhammer (*Emberiza citrinella*), Corn (*Emberiza calandra*), Ortolan (*Emberiza hortulana*) and Rustic Buntings (*Emberiza rustica*) have undergone significant declines in the past decades. Similarly, these species depend on a mosaic of open habitats, and their declines are linked to habitat loss and/or degradation generally related to agricultural intensification.³³

In addition, the compounding effects of drivers such as climate change, land-/sea-use change, overexploitation of resources, pollution and invasive alien species are likely to exacerbate the negative impacts on nature, as seen in different ecosystems³⁴. Climate change, which can alter the habitats or seasons within a species natural range, or cause the displacement or disappearance of prey species, is a rather unpredictable variable when considering species population changes. For example, sedentary species confined to mountain areas, like the Caucasian Grouse (*Tetrao gallus caucasicus*), may be driven to near extinction in the upcoming 30-50 years, as a result of shrinking alpine and sub-alpine habitats³⁵. Migratory species in

their breeding season, particularly Arctic breeding waders are among the species with the smallest proportion of their current range projected to be climatically suitable by 2050³⁶. On the other hand, a recent study using the comprehensive European Breeding Birds Atlas 2 (EBBA2) data to understand birds' range dynamics in the last decades in relation to environmental drivers and species' traits states that climate change is not (yet) a major driver behind the observed changes in bird distributions in Europe in recent years³⁷. This means that the conservation actions needed for species sensitive to its effects are very difficult to determine without further research and understanding of the issue.

³⁰ Krüger, T., Heckenroth, H., Prior, N. et al. Persecution and statutory protection have driven Rook *Corvus frugilegus* population dynamics over the past 120 years in NW-Germany. *J Ornithol* 161, 569–584 (2020). <https://doi.org/10.1007/s10336-020-01750-3>

³¹ Brochet, A., Van den Bossche, W., Jbour, S., Ndang'ang'a, P., Jones, V., Abdou, W., ... Butchart, S. (2016). Preliminary assessment of the scope and scale of illegal killing and taking of birds in the Mediterranean. *Bird Conservation International*, 26(1), 1–28. doi:10.1017/S0959270915000416.

³² Keller, V., Herrando, S., Voříšek, P., Franch, M., Kipson, M., Milanesi, P., Martí, D., Anton, M., Kľvaňová, A., Kalyakin, M.V., Bauer, H.-G. and Foppen, R.P.B. (2020) European Breeding Bird Atlas 2: Distribution, Abundance and Change. European Bird Census Council & Lynx Edicions, Barcelona.

³³ Suarez et al. (1997) Newton 2017 after EBBA2.

³⁴ https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf

³⁵ Anouschka R. Hof, Andrew M. Allen, An uncertain future for the endemic Galliformes of the Caucasus, *Science of The Total Environment*, Volume 651, Part 1, 2019, Pages 725–735, ISSN 0048-9697, <https://doi.org/10.1016/j.scitotenv.2018.09.227>.

³⁶ Nagy, S., Breiner, F., Anand, M., Butchart, S., Flörke, M., Fluet-Chouinard, E., ... Voltz, O. (2021). Climate change exposure of waterbird species in the African-Eurasian flyways. *Bird Conservation International*, 1–26. doi:10.1017/S0959270921000150.

³⁷ Aleksi Lehikoinen et al. (2021). Local colonisations and extinctions of European birds are poorly explained by changes in climate suitability (unpublished).

3.5 Gaps in knowledge

Red Lists are a dynamic tool that evolves with time as species are re-assessed according to new information or situations. They are aimed at promoting and supporting research, monitoring and conservation actions at local, regional and international levels; especially for threatened, Near Threatened and Data Deficient species. Through the process of compiling data for the European Red List of Birds, a number of knowledge gaps have been identified.

Europe has a long history of data collection and environmental surveillance. Many countries have established surveying and monitoring programmes (e.g. PECBMS³⁸ and the International Waterbird Census³⁹), and contribute to international data collection projects (e.g. European Bird Portal⁴⁰), leading to the region having a comparatively good biodiversity knowledge database. This is an advantage, as recent and good quality data are essential to successfully inform and address conservation issues across the continent.

Despite this, Europe's knowledge base about birds still has room for improvement. Across Europe there are significant geographic, geopolitical and taxonomic biases in the quality of data available on the distribution and status of species. Unless they are part of a specific monitoring or conservation programme, surveys are often irregularly undertaken or species are selectively surveyed for, often depending on their conservation priority – a factor which is often based on the existing knowledge of a species. The population size and trend data reported during the time of this project were found to sometimes be old and re-used, or were based solely on expert opinion, again, due to lack of recent data availability, sometimes with the most recent sources using data dating back to the 1990s or early 2000s. This means that there exists a certain proportion of species for which the information is too old or uncertain, or for which there is not enough information at all to be able to calculate a realistic trend. In these cases, the trend is labelled as unknown. In Europe, although the data may be old or of poor quality, there still is enough information to allow the assessment of all bird species, even those with unknown trends,

without the use of the Data Deficient category. However, in a few circumstances, this can result in an assessment in which the lack of trend information leads to a default Least Concern assessment, whereas if the trends were known, the species may actually be Near Threatened or threatened.

When data is lacking, it is often evident that for some countries this is because of a shortage of resources for regular monitoring of bird populations (e.g. time, personnel and/or financial resources) which would allow for better coverage of species and areas. The lack of information could also be due to poor cooperation between governments, institutions and organisations. In some rare cases, data may be scarce due to the species being present in inaccessible places, although with today's technology a solution is likely possible. Context is an important factor in understanding the reasons for changes in a species' population size trends or range. Understanding the causes of a species' decline or recovery can help analyse the key threats to birds across Europe. Nonetheless, currently this tends to be a secondary priority in terms of data reporting, and more research into this subject is needed to fully understand the various impacts of human activity on nature.

To counter these issues, there is a need for more coordinated national and international efforts in bird monitoring, to ensure the monitoring cycles in different countries concur with each other and, ideally, with the timings of the European Red List of Birds updates. These survey programmes need to be coordinated and communicated across organisations, institutions and governmental bodies in order to ensure that information is transferred and that everyone is working together towards the same goals. To support these surveys, dedicated resources should be available at local, national and international levels, with policy tools created enabling the easy access to these resources and encouraging the collection of data. The EU legal and financial mechanisms, for example, already play a crucial role in this process, such as the reporting of national data under the Birds and Habitats Directives, and the development of the LIFE Programme, which enables the access to funding for conservation-based projects.

³⁸ <https://pecbms.info/>

³⁹ <https://www.wetlands.org/knowledge-base/international-waterbird-census/>

⁴⁰ <https://eurobirdportal.org/ebp/en/#home/HIRRUS/r52weeks/CUCCAN/r52weeks/>

4.

Biodiversity protection in Europe

Europe has a long history of nature protection. From decrees to protect sovereigns' own hunting grounds during the Middle Ages to the modern-day democratic international conventions and agreements; environmental law has always aimed at preserving nature for its socio-economic and intrinsic value.

In Europe, environmental legislation is created and implemented at different geographic and administrative levels. National and regional biodiversity laws set up the extent and means for protection of species, habitats and other natural resources. Different systems of protected areas, e.g., national parks, nature reserves or protected landscape monuments exist in each country. To put the protection of these areas in practice, site-specific management or action plans are often developed in collaboration with local authorities and stakeholders. Similarly, action plans for the conservation of priority (e.g., nationally, European or globally threatened) species may be developed. Other types of national or local law usually define the protection and management of particular parts of the environment, such as rivers and lakes, marine or coastal areas, forests etc.

Nature is a continuum, which political borders cross and often fragment, as do different human activities. Therefore, international cooperation is crucial for the successful protection of biodiversity at an appropriate scale. Most European countries and all EU member states are signatories to a number of relevant international conventions, including the Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979), the Convention on Biological Diversity (1992) and the African-Eurasian Migratory Waterbird Agreement (AEWA). The international trade of a small number of European bird species is regulated under the Convention on International Trade in Endangered Species (CITES).

The Bern Convention is a binding international legal instrument that aims to conserve wild flora and fauna and their natural habitats. It covers all European countries and some African states. It aims to increase cooperation between contracting parties and to regulate the exploitation of species (including migratory species). Key provisions of the Convention include

the establishment of protected areas (defined as the Emerald network), the protection of breeding and resting sites and the regulation of disturbance, capture, killing and trade of wild species. The Bern Convention has played a fundamental role in promoting the adoption of International Species Action Plans on European threatened or Near Threatened species.

The African-Eurasian Migratory Waterbird Agreement (AEWA) is an international treaty for the conservation of migratory waterbirds, developed under the auspices of the Convention on Migratory Species (CMS, or Bonn Convention). Among other obligations, Parties to the Agreement are required to adopt so-called International Single Species Action Plans (SSAPs) for species of particular concern (i.e., species/populations with an unfavourable conservation status). These SSAPs cover all Range States relevant for the species to ensure a coordinated conservation approach along the entire flyway.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), adopted in 1973, has 178 countries that are Parties to the Convention. The Convention aims to protect species from the detrimental effects of international trade by establishing an international legal framework for preventing or controlling trade. Species listed on Appendix I of the Convention are considered to be threatened with extinction and are not allowed to be traded commercially, while those on Appendix II are only allowed to enter international trade under specific controlled circumstances (including a licensing system). Parties are obliged to develop national legislation effectively implementing the obligations of the Convention, including setting sustainable quotas for Appendix II species. Currently, 687 species of fauna, including 155 bird species are listed on Appendix I and more than 5,000 species of fauna, including 1,279 bird species, on Appendix II⁴¹. CITES is implemented in the EU through a set of Regulations known as the EU Wildlife Trade Regulations⁴².

The Convention on Biological Diversity is an international legal instrument for the conservation and sustainable use of biological diversity. Parties have to develop national biodiversity strategies or action plans (NBSAPs). They also need to agree on

⁴¹ <https://cites.org/>

⁴² https://ec.europa.eu/environment/cites/legislation_en.htm

a ten-year global strategic plan with concrete targets in order to achieve the overall objectives of the Convention. At the time of publication of this report, world leaders are developing the new Post-2020 Global Biodiversity Framework with a package of commitments to address and reverse global biodiversity loss by 2030⁴³.

In the EU, nature conservation policy is based on two main pieces of legislation: the Birds Directive of 1979 and the Habitats Directive of 1992, both often referred to as the EU Nature Directives. The Birds Directive provides a binding, legal framework for the protection of all wild birds in the EU, including their eggs, nests and habitats. EU Member States need to ensure that a sufficient area and diversity of habitats is available for all wild bird species, including those that live on farmland and in urban environments. The most important areas for threatened birds on Annex I of the Birds Directive and for regularly occurring migratory birds should be designated as Special Protection Areas (SPAs). The Birds Directive also regulates the hunting of birds in the EU, restricting the hunting seasons and methods, as well as the species that can be hunted (listed in Annex II).

The Habitats Directive is Europe's most powerful tool to address habitat protection, listing the priority habitats (e.g. specific types of wetlands, meadows and marine habitats) on Annex I and species on Annex II. As with the Birds Directive, important sites under the Habitats Directive should be designated as Special Areas of Conservation (SACs). These form, together with the SPAs, the Natura 2000 network: the largest coordinated network of protected areas in the world. It stretches across all Member States and covers over 18% of the EU's land area and more than 6% of its sea territories⁴⁴. Each Member State is required to identify sites of European importance for Natura 2000 and is encouraged to put in place special management plans, combining long-term conservation objectives with economic and social activities.

The EU Marine Strategy Framework Directive (MSFD)⁴⁵ aims to protect the marine environment across Europe more effectively. It requires Member States to achieve Good Environmental Status (GES), following an ecosystem-based approach, focused on 11 descriptors related to ecosystem features, human drivers and pressures⁴⁶. The EU Maritime Spatial Planning (MSP) Directive aims to manage the use of our seas and oceans coherently, and to ensure that human activities take place in an efficient, safe and sustainable way, guaranteeing the protection of nature at sea. In addition, Europe's marine environment is protected

under regional conventions like the Baltic Marine Environment Protection Commission⁴⁷ (HELCOM), the OSPAR Commission⁴⁸, Conservation of Arctic Flora and Fauna⁴⁹ (CAFF), the Commission on the Protection of the Black Sea Against Pollution⁵⁰.

The majority of Europe's threatened bird species are listed on the Birds Directive Annexes and the Bern Convention Appendices.

Besides the above-mentioned nature protection legal frameworks, several other sectoral policies exist in the EU with certain measures and practices that aim to protect nature. Most relevant for the agricultural environment is the EU's Common Agricultural Policy⁵¹ (CAP), with its 'agri-environment and climate measures' under Pillar II. However, these are of very varying quality and a review by the European Court of Auditors in 2020 found that 'most CAP funding has little positive impact on biodiversity'⁵². For marine species and habitats, together with the Marine Strategy Framework Directive, the EU's Common Fisheries Policy (CFP) aims at setting rules for sustainably managing European fishing fleets and conserving fish stocks⁵³. Inland surface waters, coastal waters and groundwater are protected under the framework of the EU Water Framework Directive. It aims to prevent and reduce pollution, promote sustainable water use, protect and improve the aquatic environment and mitigate the effects of floods and droughts.

Within a renewed political effort to address biodiversity loss, the European Union responded to its global commitments by developing a 10-year Biodiversity Strategy. In May 2020, a new comprehensive and ambitious EU 2030 Biodiversity Strategy was put forward by the European Commission and largely endorsed by EU legislators. Its aim is to put Europe's biodiversity on a path to recovery with specific actions and commitments⁵⁴. These include the development of a new nature restoration law, a Forest Strategy (published in July 2021), an action plan to conserve fisheries resources and protect marine ecosystem, improved financing for biodiversity measures in the EU, and an update of the Directive of Sustainable Use of Pesticides. The strategy sets targets for the non-deterioration of all species and habitats, as well as significant improvement of at least 30% of species and habitats. It also urges Member States to assure the protection of 30% of land and 30% of sea by 2030, and strictly protect at least 10%. The agreement on the long-term EU Budget from 2021 to 2027 includes a commitment to spend at least 7.5% of the EU Budget on biodiversity as of 2025, and 10% as of 2026.

⁴³ www.cbd.int

⁴⁴ https://ec.europa.eu/environment/nature/index_en.htm

⁴⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0056>

⁴⁶ https://ec.europa.eu/environment/nature/index_en.htm

⁴⁷ <https://helcom.fi/>

⁴⁸ <https://www.ospar.org/>

⁴⁹ <https://www.caff.is/>

⁵⁰ http://www.blacksea-commission.org/_convention.asp

⁵¹ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

⁵² https://www.ec.europa.eu/Lists/ECADocuments/SR20_13/SR_Biodiversity_on_farmland_EN.pdf

⁵³ https://ec.europa.eu/oceans-and-fisheries/policy/common-fisheries-policy-cfp_en

⁵⁴ https://ec.europa.eu/environment/strategy/biodiversity-strategy-2030_en

5.

Recommendations and future work

5.1 Recommendations for policy and practice

The existing biodiversity protection framework in Europe (see Section 4) has contributed, directly or indirectly, to the successful recovery of many threatened species and protection and restoration of key habitats. These have arisen thanks to the establishment of a network of protected areas, collaboration to conserve sites and to take action for species often across borders. Yet, this collective effort, while essential, has to date been insufficient to reverse the overall decline in our continent's biodiversity. Sadly, many success stories have been limited to the local level. For certain species, such actions may be enough to maintain stable or even improving populations. The decline of many widespread and common species (e.g., birds and butterflies) signals, however, a problem of a much larger scale, a systemic issue in the functioning of ecosystems caused by a diverse array of human-induced changes. Therefore, future conservation efforts in Europe should not only focus on action locally but also seek to deliver more fundamental change at a bigger scale. Collaboration between decision-makers and conservation practitioners needs to be expanded while securing greater involvement from consumers, producers, landowners and other businesses.

As intergovernmental reports on climate change and biodiversity have recommended^{54,55}, we need to rethink the way we produce, trade, consume and reuse our vital resources. Ultimately, as humans, we depend on a healthy natural environment (including irreplaceable services and functions such as the provision of clean water, pollination of crops, flood protection, and a stable climate; which are also fundamental for our recreation and well-being). Without the services provided by the natural environment, our health, society and economy would not hold up. Thus, a revision of the way we develop and implement sectoral policies will be

key to future success. For example, a review by the European Court of Auditors in 2020 found that "most CAP funding has little positive impact on biodiversity"⁵⁶, while another report from 2020 published by the same institution⁵⁷ stated that "overall, while a framework was in place to protect the marine environment, the EU's actions had not restored seas to good environmental status, nor fishing to sustainable levels in all seas". This was also supported by the European Environment Agency, which identified in 2020 that "Marine biodiversity remains under threat in Europe's seas. A high proportion of marine species and habitats' assessments continue to show an 'unfavourable conservation status' or a status that is 'unknown'⁵⁸. Similar critiques of progress can be found outside of the EU, for example in the UK State of Nature Report⁵⁹.

Through its Green Deal, the EU has expressed the ambition to tackle these current environmental and socio-economic challenges in a transformative way. It aims to transform the EU into a modern, resource-efficient and competitive economy, leading by example towards being the first climate-neutral continent⁶⁰. The EU commits to combat the intrinsically linked biodiversity and climate crises with its 2030 Biodiversity Strategy, as part of the Green Deal, for the broader European continent and the world. In addition, 88 Heads of State (including 14 outside the EU) have signed up to the Leaders' Pledge for Nature⁶¹ to step up global ambition for biodiversity. This provides momentum for securing an ambitious new global biodiversity framework for 2030, set to be approved by a Conference of the Parties to the UN Convention on Biological Diversity in Kunming, China in April 2022.

To create a different future, where nature is thriving in harmony with people, where common species remain common and fewer species are at risk of extinction, governments across Europe need to develop coherent regional and national biodiversity strategies including the actions outlined in the next pages:

⁵⁴ <https://www.ipcc.ch/2019/>

⁵⁵ <https://ipbes.net/global-assessment>

⁵⁶ https://www.eca.europa.eu/Lists/ECADDocuments/SR20_13/SR_Biodiversity_on_farmland_EN.pdf

⁵⁷ <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=57066>

⁵⁸ <https://www.eea.europa.eu/publications/marine-messages-2>

⁵⁹ <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf>

⁶⁰ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

⁶¹ <https://www.leaderspledgefornature.org/>

Conservation ambition and action

- Translate global targets for nature's recovery into EU and domestic law.
- Deliver an expanded and better managed network of protected areas (bolstering the existing Emerald and Natura 2000 networks) consistent with global ambition for 30% of land and sea to be protected and well managed by 2030. Protected areas (PAs) must include substantial areas under strict protection such as 'no take' marine protected areas and 'no logging' forests allowed to fully recover to near pristine state, as proposed by the EU biodiversity strategy target of putting a third of PAs under strict protection.
- Improve and expand targeted conservation actions for threatened and declining species, populations and habitats.
- Prioritise the large-scale restoration of carbon-rich ecosystems to deliver benefits for both wildlife and the climate. There should be a particular focus on grassland, peat, forest and coastal habitats.
- Ensure that carbon sequestration always contributes to ecosystem and biodiversity health and resilience, while adaptation policies to climate change prioritise nature-based solutions and are synergistic with ecosystem restoration.
- Enhance the collaboration across borders (including nations in sub-Saharan Africa) to support the conservation of long-distance migratory birds.

Funding

- Secure adequate funding from national, EU and international levels to support conservation objectives fulfilling, for example, the EU commitment to spend 10% of the EU Budget on biodiversity.
- Provide specific funding to developing countries, especially in sub-Saharan Africa to support conservation of migratory birds on their wintering grounds.
- End perverse subsidies that harm nature (for example by overhauling agriculture policy and reforming agriculture incentives to reward wildlife-friendly farming to support the recovery of farmland birds), while ensuring that nature objectives are embedded in other funding schemes (for example European Maritime Fisheries and Aquaculture Fund and Neighbourhood Development and International Cooperation Instrument).

Regulation and enforcement for sustainable management of land and sea

- To support the recovery of farmland birds, introduce better regulation and law enforcement concerning agricultural practices that are harmful to the environment. In particular, policies should massively reduce the use of pesticides, nitrogen pollution, water over abstraction and simplification of landscapes. Farm policies must support a transition towards agro-ecological practices, and crucially, the provision of a minimum of 10% of landscape features, native vegetation and ecological infrastructure at farm level (as foreseen by the EU Biodiversity Strategy, for example).
- To support the recovery of threatened forest bird species, enable the full and strict protection of vulnerable forests (e.g. primary and old-growth forests), support a transition of forestry towards "close to nature forest management" and champion ecologically compatible afforestation policies (applying the principle of "the right trees in the right places for the right reasons", as indicated in the new EU Forest Strategy).
- Roll out effective policies addressing unsustainable consumption that drives agricultural forestry and fisheries expansion and intensification. Subsidies that boost consumption (e.g. for burning biomass or promoting of meat and dairy) should be removed, waste prevention and recycling must be promoted through circular economy legislation, and socially sensitive policies should support a dietary shift away from animal consumption.
- To support seabird conservation, evolve fisheries policies to eliminate bycatch and restore food chains, while also improving biosecurity measures and taking action to reduce the threat posed by invasive non-native species especially on seabird breeding grounds.
- To support both migratory bird and raptor conservation, tackle the illegal and legal, unsustainable hunting and persecution (e.g. poisoning) through improved enforcement of national legislation within and beyond the European continent.
- To reduce future pressures on species, ensure energy (including renewable energy) and other infrastructure development are designed, sited and built in harmony with nature, without adversely impacting birds and their habitats.

Monitoring and reporting

- Continue standardised regular monitoring of birds and other taxa, while addressing knowledge gaps (see Section 3.5), to ensure that changes are well understood and measures are taken in a timely manner to prevent further deterioration.
- Continue monitoring bird species with observed or projected population declines, including common species associated with farmland or forests and considered key indicators of the state of the environment (see Sections 3.3 and 3.4).
- Ensure transparent reporting of progress of EU and national action to encourage scrutiny, accountability and to adapt policies as necessary to improve future conservation success.

5.2 Conclusions

The results of this report show that while there is progress made in the conservation of some European birds, it is clear that if we want to achieve the global targets to 2030, we need an immediate action at a continental scale. While certain threats, e.g., persecution can be tackled relatively easily through legal regulations and implementation, the systemic threats observed in the natural environment (e.g. unsustainable agriculture, forestry or fisheries practices) will require a change that:

1. Is transformative, starting from the way we source prime materials, through transportation, production, discarding and recovering resources.
2. Involves all stakeholders – from consumers to producers, landowners and other businesses.
3. Ensures the protection of ecosystems which are still in a good status and the restoration of degraded ones, through adequate implementation, funding and research.

5.3 Future work

The data used for the European Red List of Birds gives a general overview of the threats to birds in Europe. Furthermore, considering that threat analysis can be very complex and difficult to interpret, a more detailed analysis should be the purpose of separate research, perhaps addressed by taxonomic group, type of habitat or geographic region.

Within the scope of further analyses should be the link between the extinction risk and various threat factors for European species breeding in the Arctic, migratory birds, seabirds, species inhabiting the alpine and sub-alpine areas, as well as forest specialists.

The differentiation between the direct and indirect impact of agricultural practices on bird populations should help direct practical measures to benefit nature at systemic level.

In this regard, assessing the differences between the main driving factors of species declines within the territory of the

European Union and beyond (as a potential consequence of the different legal and enforcement processes) could provide valuable insights into practices that benefit biodiversity as opposed to those that harm it.

The impact of climate change or invasive non-native species as threats with likely significant impact on species in the future, should be better understood and monitored.

These and many other research topics can be delivered through the data gathered under the European Red List of Birds, while they could largely benefit from a joint approach with other data sources, including spatial analysis, statistical modelling and citizen science.

The European Red List of Birds is part of a wider initiative aimed at assessing the status of European species. Together with other sources like the European Breeding Bird Atlas 2 or the Common Bird Monitoring Scheme, it provides a key resource for decision-makers, policymakers, resources managers, environmental planners and NGOs. It has gathered large amounts of data on the population, ecology, habitats and threats of each bird species. These data are freely available on the IUCN Red List website (<https://www.iucnredlist.org/regions/europe>), on the European Commission's website (<http://ec.europa.eu/environment/nature/conservation/species/redlist>) and through paper publications.

The European Red List of Birds will also form the basis for the identification of Species of European Conservation Concern (SPEC), following the methodology developed in the previous assessments (Tucker & Heath 1994, BirdLife International 2004, BirdLife International 2017). It will also be used (depending on the availability of resources) to calculate the Red List Index for European Birds which measures the projected overall regional extinction risk of sets of species, and tracks changes in this risk⁶².

The results presented in this report can be applied to inform policy and identify priority species to include in research and monitoring programmes. It can also serve in the process of measuring progress towards national and international biodiversity targets.

⁶² <https://www.eea.europa.eu/data-and-maps/indicators/red-list-index-for-european-species/red-list-index-for-european/?searchterm=None>

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Appendix

Appendix 1. Red List status, trend and population size estimate, as well as endemism of birds in Europe

Scientific species name	Common species name	Season of assessment	IUCN Red List category (Europe)	IUCN Red List criteria (Europe)	Population trend	Population size [mature individuals] min-max, best estimate	(Near*) endemic to Europe?
<i>Cygnus columbianus</i>	Tundra Swan	W	VU	A4abcde	Decreasing	11700-23500,14600	
<i>Cygnus cygnus</i>	Whooper Swan	B	LC		Increasing	66800-102000,82000	
<i>Cygnus olor</i>	Mute Swan	B	LC		Increasing	169000-236000,199000	
<i>Anser albifrons</i>	Greater White-fronted Goose	W	LC		Stable	1180000-1970000,1420000	
<i>Anser anser</i>	Greylag Goose	W	LC		Increasing	797000-975000,866000	
<i>Anser brachyrhynchus</i>	Pink-footed Goose	W	LC		Increasing	370000-377000,373000	Yes
<i>Anser caerulescens</i>	Snow Goose	B	LC		Increasing	2000-10000,4500	
<i>Anser erythropus</i>	Lesser White-fronted Goose	B	VU	D1	Decreasing	340-530,420	
<i>Anser fabalis</i>	Bean Goose	W	LC		Increasing	468000-647000,534000	
<i>Branta bernicla</i>	Brent Goose	W	LC		Stable	198000-225000,211000	
<i>Branta canadensis</i>	Canada Goose	B	LC		Increasing	20000-100000,44700	
<i>Branta leucopsis</i>	Barnacle Goose	W	LC		Increasing	877000-1010000,939000	Yes
<i>Branta ruficollis</i>	Red-breasted Goose	W	VU	A2bcd+3bcd+4bcd	Decreasing	10000-49400,18800	Yes*
<i>Tadorna ferruginea</i>	Ruddy Shelduck	B	LC		Unknown	35500-64100,46500	
<i>Tadorna tadorna</i>	Common Shelduck	B	LC		Stable	104000-154000,124000	
<i>Anas acuta</i>	Northern Pintail	B	VU	A2bcde+A3bcde+A4bcde	Decreasing	310000-401000,353000	
<i>Anas crecca</i>	Common Teal	W	LC		Increasing	1040000-1640000,1240000	
<i>Anas platyrhynchos</i>	Mallard	W	LC		Decreasing	2830000-3770000,3200000	
<i>Mareca penelope</i>	Eurasian Wigeon	B	LC		Decreasing	451000-733000,574000	
<i>Mareca strepera</i>	Gadwall	B	LC		Increasing	164000-262000,202000	
<i>Marmaronetta angustirostris</i>	Marbled Teal	B	VU	D1	Stable	760-2200	
<i>Spatula clypeata</i>	Northern Shoveler	B	LC		Decreasing	295000-391000,339000	
<i>Spatula querquedula</i>	Garganey	B	LC		Decreasing	681000-920000,789000	
<i>Aythya ferina</i>	Common Pochard	W	VU	A2abcde+3bcde+4abcde	Decreasing	373000-679000,500000	
<i>Aythya fuligula</i>	Tufted Duck	B	NT	A2bcde	Decreasing	879000-1240000,1060000	
<i>Aythya marila</i>	Greater Scaup	B	LC		Decreasing	96400-170000,128000	
<i>Aythya nyroca</i>	Ferruginous Duck	B	LC		Unknown	18000-47000,28600	
<i>Bucephala clangula</i>	Common Goldeneye	B	LC		Decreasing	770000-990000,870000	
<i>Bucephala islandica</i>	Barrow's Goldeneye	B	NT	D2	Stable	1600-1800,1700	
<i>Clangula hyemalis</i>	Long-tailed Duck	W	LC		Decreasing	865000-1610000,1120000	
<i>Histrionicus histrionicus</i>	Harlequin Duck	B	LC		Stable	14000-18000,15700	
<i>Melanitta fusca</i>	Velvet Scoter	B	VU	A2abcde	Decreasing	36800-80300,57100	Yes*
<i>Melanitta nigra</i>	Common Scoter	B	LC		Unknown	45200-71100,56500	Yes*
<i>Mergellus albellus</i>	Smew	B	LC		Stable	21700-34000,27200	
<i>Mergus merganser</i>	Goosander	B	LC		Increasing	162000-267000,208000	
<i>Mergus serrator</i>	Red-breasted Merganser	B	NT	A2bcde+4bcde	Decreasing	141000-282000,198000	
<i>Netta rufina</i>	Red-crested Pochard	B	LC		Decreasing	69300-104000,82000	
<i>Oxyura leucocephala</i>	White-headed Duck	B	VU	C1+2a(i)	Decreasing	1000-1600,1300	
<i>Polysticta stelleri</i>	Steller's Eider	W	LC		Unknown	15800-18400,17000	
<i>Somateria mollissima</i>	Common Eider	B	EN	A4abcde	Decreasing	1220000-1630000,1410000	
<i>Somateria spectabilis</i>	King Eider	W	LC		Unknown	682000-683000,683000	
<i>Bonasa bonasia</i>	Hazel Grouse	B	LC		Unknown	4010000-6960000,5240000	
<i>Lagopus lagopus</i>	Willow Grouse	B	LC		Stable	2560000-4050000,3230000	
<i>Lagopus muta</i>	Rock Ptarmigan	B	LC		Fluctuating	619000-1700000,963000	
<i>Lyrurus mlokosiewiczzi</i>	Caucasian Grouse	B	NT	A3cde	Unknown	28300-57600,40300	Yes
<i>Lyrurus tetrix</i>	Black Grouse	B	LC		Unknown	2430000-3750000,3000000	
<i>Tetrao urogallus</i>	Western Capercaillie	B	LC		Decreasing	1590000-3420000,2110000	
<i>Alectoris barbara</i>	Barbary Partridge	B	LC		Unknown	15500-41000,25100	
<i>Alectoris chukar</i>	Chukar	B	LC		Unknown	1350000-3900000,2240000	
<i>Alectoris graeca</i>	Rock Partridge	B	NT	A2bcd+3bcd+4bcd	Decreasing	75300-123000,95400	Yes
<i>Alectoris rufa</i>	Red-legged Partridge	B	NT	A2bcde+3bcde+4bcde	Decreasing	9950000-13700000,11700000	Yes
<i>Ammoperdix griseogularis</i>	See-see Partridge	B	VU	C2a(ii)	Decreasing	7900-13600,10200	
<i>Coturnix coturnix</i>	Common Quail	B	NT	A2bcde+3bcde+4bcde	Decreasing	5000000-9030000,6560000	
<i>Francolinus francolinus</i>	Black Francolin	B	LC		Fluctuating	21400-37700,28000	

Scientific species name	Common species name	Season of assessment	IUCN Red List category (Europe)	IUCN Red List criteria (Europe)	Population trend	Population size [mature individuals] min-max, best estimate	(Near*) endemic to Europe?
<i>Perdix perdix</i>	Grey Partridge	B	LC		Decreasing	2290000-3750000,2820000	
<i>Phasianus colchicus</i>	Common Pheasant	B	LC		Stable	9700-16300,12000	
<i>Tetraogallus caspius</i>	Caspian Snowcock	B	LC		Decreasing	8400-20800,13200	
<i>Tetraogallus caucasicus</i>	Caucasian Snowcock	B	LC		Stable	10000-32400,16300	Yes
<i>Turnix sylvaticus</i>	Common Buttonquail	B	RE		N/A	0-0,0	
<i>Gavia adamsii</i>	Yellow-billed Loon	W	VU	D1	Unknown	660-670,670	
<i>Gavia arctica</i>	Arctic Loon	B	LC		Decreasing	142000-194000,166000	
<i>Gavia immer</i>	Common Loon	W	LC		Stable	5700-7200,6300	
<i>Gavia stellata</i>	Red-throated Loon	B	LC		Unknown	91100-146000,115000	
<i>Podiceps auritus</i>	Horned Grebe	B	NT	C1	Decreasing	14200-19200,16100	
<i>Podiceps cristatus</i>	Great Crested Grebe	B	LC		Stable	772000-1060000,903000	
<i>Podiceps grisegena</i>	Red-necked Grebe	B	VU	A2bcde+4bcde	Decreasing	31200-58500,42100	
<i>Podiceps nigricollis</i>	Black-necked Grebe	B	VU	A2bce+3bce+4bce	Decreasing	71100-116000,88500	
<i>Tachybaptus ruficollis</i>	Little Grebe	B	LC		Stable	209000-390000,275000	
<i>Bulweria bulwerii</i>	Bulwer's Petrel	B	LC		Unknown	92100-103000,97000	
<i>Calonectris borealis</i>	Cory's Shearwater	B	LC		Unknown	503000-506000,505000	Yes*
<i>Calonectris diomedea</i>	Scopoli's Shearwater	B	LC		Unknown	57000-94300,72800	
<i>Fulmarus glacialis</i>	Northern Fulmar	B	VU	A4abcde	Decreasing	6350000-7660000,6790000	
<i>Hydrobates castro</i>	Band-rumped Storm-petrel	B	LC		Unknown	13200-14300,13700	
<i>Hydrobates leucorhous</i>	Leach's Storm-petrel	B	NT	B2ab(v)	Decreasing	117000-176000,141000	
<i>Hydrobates montei</i>	Monteiro's Storm-petrel	B	VU	D1+2	Unknown	720-770,740	Yes
<i>Hydrobates pelagicus</i>	European Storm-petrel	B	LC		Unknown	810000-848000,825000	Yes
<i>Pelagodroma marina</i>	White-faced Storm-petrel	B	EN	B2ab(iii,v)	Decreasing	155000-222000,186000	
<i>Pterodroma deserta</i>	Desertas Petrel	B	VU	D1+2	Stable	320-360,340	Yes
<i>Pterodroma madeira</i>	Zino's Petrel	B	EN	D	Increasing	130-160,140	Yes
<i>Puffinus lherminieri</i>	Audubon's Shearwater	B	NT	B2ab(v); C1+2a(i)	Decreasing	5000-11800,7600	
<i>Puffinus mauretanicus</i>	Balearic Shearwater	B	CR	A4abcde	Decreasing	5800-5900,5800	Yes
<i>Puffinus puffinus</i>	Manx Shearwater	B	LC		Unknown	693000-779000,733000	Yes
<i>Puffinus yelkouan</i>	Yelkouan Shearwater	B	VU	A2abcde	Unknown	47000-81800,61900	Yes
<i>Morus bassanus</i>	Northern Gannet	B	LC		Increasing	821000-823000,822000	Yes
<i>Pelecanus crispus</i>	Dalmatian Pelican	B	LC		Increasing	7500-9400,8300	
<i>Pelecanus onocrotalus</i>	Great White Pelican	B	LC		Increasing	18700-40700,27400	
<i>Anhinga rufa</i>	African Darter	B	RE		N/A	0-0,0	
<i>Gulosus aristotelis</i>	European Shag	B	LC		Decreasing	142000-162000,152000	Yes
<i>Microcarbo pygmaeus</i>	Pygmy Cormorant	B	LC		Increasing	84600-111000,96600	
<i>Phalacrocorax carbo</i>	Great Cormorant	B	LC		Increasing	828000-1030000,926000	
<i>Ardea alba</i>	Great White Egret	B	LC		Increasing	79800-132000,102000	
<i>Ardea cinerea</i>	Grey Heron	B	LC		Decreasing	492000-700000,583000	
<i>Ardea purpurea</i>	Purple Heron	B	LC		Increasing	57700-97300,73500	
<i>Ardeola ralloides</i>	Squacco Heron	B	LC		Stable	36600-67000,49300	
<i>Botaurus stellaris</i>	Eurasian Bittern	B	LC		Stable	147000-206000,174000	
<i>Bubulcus ibis</i>	Cattle Egret	B	LC		Increasing	147000-184000,164000	
<i>Ciconia ciconia</i>	White Stork	B	LC		Increasing	502000-563000,530000	Yes
<i>Ciconia nigra</i>	Black Stork	B	LC		Unknown	20200-32400,25400	
<i>Egretta garzetta</i>	Little Egret	B	LC		Decreasing	121000-190000,146000	
<i>Geronticus eremita</i>	Northern Bald Ibis	B	RE		N/A	0-0,0	
<i>Ixobrychus minutus</i>	Common Little Bittern	B	LC		Stable	171000-301000,230000	
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	B	LC		Stable	114000-169000,137000	
<i>Platalea leucorodia</i>	Eurasian Spoonbill	B	LC		Increasing	23800-36300,29000	
<i>Plegadis falcinellus</i>	Glossy Ibis	B	LC		Increasing	60200-120000,80500	
<i>Phoenicopterus roseus</i>	Greater Flamingo	B	LC		Increasing	71800-265000,144000	
<i>Aegypius monachus</i>	Cinereous Vulture	B	LC		Increasing	5800-6700,6100	
<i>Gypaetus barbatus</i>	Bearded Vulture	B	NT	D1	Increasing	1200-2000,1500	
<i>Gyps fulvus</i>	Griffon Vulture	B	LC		Increasing	69600-89400,75700	
<i>Neophron percnopterus</i>	Egyptian Vulture	B	VU	C1	Decreasing	6100-9000,7100	
<i>Aquila adalberti</i>	Spanish Imperial Eagle	B	VU	D1	Increasing	1000-1100,1100	Yes
<i>Aquila chrysaetos</i>	Golden Eagle	B	LC		Increasing	19200-25600,22100	
<i>Aquila fasciata</i>	Bonelli's Eagle	B	LC		Stable	2100-2500,2300	
<i>Aquila heliaca</i>	Eastern Imperial Eagle	B	LC		Increasing	3900-6000,4800	
<i>Aquila nipalensis</i>	Steppe Eagle	B	CR	A2abcd+3bcd+4abcd	Decreasing	1500-2300,1800	
<i>Circus gallicus</i>	Short-toed Snake-eagle	B	LC		Increasing	19800-31900,24600	
<i>Clanga clanga</i>	Greater Spotted Eagle	B	VU	A2abcde+3bcde+4abcde	Decreasing	1900-2500,2200	
<i>Clanga pomarina</i>	Lesser Spotted Eagle	B	LC		Increasing	34200-46200,39700	Yes

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<i>Haliaeetus albicilla</i>	White-tailed Sea-eagle	B	LC		Increasing	20900-29200,24500	
<i>Hieraetus pennatus</i>	Booted Eagle	B	LC		Increasing	46600-60500,52100	
<i>Pandion haliaetus</i>	Osprey	B	LC		Increasing	19200-27100,23000	
<i>Milvus migrans</i>	Black Kite	B	LC		Increasing	372000-507000,433000	
<i>Milvus milvus</i>	Red Kite	B	LC		Increasing	65100-76600,70300	Yes
<i>Circus aeruginosus</i>	Western Marsh-harrier	B	LC		Stable	303000-485000,380000	
<i>Circus cyaneus</i>	Hen Harrier	B	LC		Decreasing	112000-174000,139000	
<i>Circus macrourus</i>	Pallid Harrier	B	LC		Stable	2000-4300,2900	
<i>Circus pygargus</i>	Montagu's Harrier	B	LC		Decreasing	139000-219000,174000	
<i>Buteo buteo</i>	Eurasian Buzzard	B	LC		Increasing	1760000-2460000,2070000	
<i>Buteo lagopus</i>	Rough-legged Buzzard	B	LC		Stable	57600-117000,81400	
<i>Buteo rufinus</i>	Long-legged Buzzard	B	LC		Increasing	27600-45800,35300	
<i>Pernis apivorus</i>	European Honey-buzzard	B	LC		Stable	241000-350000,289000	Yes
<i>Accipiter badius</i>	Shikra	B	NT ^o	D1	Stable	200-1100,450	
<i>Accipiter brevipes</i>	Levant Sparrowhawk	B	LC		Stable	7700-15300,10800	
<i>Accipiter gentilis</i>	Northern Goshawk	B	LC		Decreasing	234000-380000,291000	
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	B	LC		Stable	728000-1150000,915000	
<i>Elanus caeruleus</i>	Black-winged Kite	B	LC		Stable	2600-5700,3800	
<i>Falco biarmicus</i>	Lanner Falcon	B	NT	D1	Unknown	840-1700,1200	
<i>Falco cherrug</i>	Saker Falcon	B	EN	C1	Decreasing	860-1300,1100	
<i>Falco columbarius</i>	Merlin	B	VU	A2bce	Decreasing	40100-83400,59200	
<i>Falco eleonora</i>	Eleonora's Falcon	B	LC		Stable	28400-28900,28600	Yes*
<i>Falco naumanni</i>	Lesser Kestrel	B	LC		Stable	65900-85200,73400	
<i>Falco peregrinus</i>	Peregrine Falcon	B	LC		Increasing	32200-62100,41300	
<i>Falco rusticolus</i>	Gyr Falcon	B	LC		Stable	2000-3500,2600	
<i>Falco subbuteo</i>	Eurasian Hobby	B	LC		Stable	280000-437000,342000	
<i>Falco tinnunculus</i>	Common Kestrel	B	LC		Decreasing	823000-1270000,991000	
<i>Falco vespertinus</i>	Red-footed Falcon	B	VU	A2abcde+4abcde	Decreasing	115000-170000,140000	
<i>Crex crex</i>	Corncrake	B	LC		Decreasing	2310000-3430000,2800000	
<i>Fulica atra</i>	Common Coot	B	NT	A2abcde+4abcde	Decreasing	2030000-3360000,2590000	
<i>Fulica cristata</i>	Red-knobbed Coot	B	CR	C2a(ii)	Decreasing	42-90,60	
<i>Gallinula chloropus</i>	Common Moorhen	B	LC		Decreasing	1790000-2670000,2150000	
<i>Porphyrio porphyrio</i>	Purple Swamphen	B	LC		Fluctuating	30400-114000,56500	
<i>Porzana porzana</i>	Spotted Crake	B	LC		Decreasing	200000-289000,235000	
<i>Rallus aquaticus</i>	Western Water Rail	B	LC		Unknown	315000-653000,438000	
<i>Zapornia parva</i>	Little Crake	B	LC		Unknown	82000-203000,121000	
<i>Zapornia pusilla</i>	Baillon's Crake	B	LC		Unknown	2000-4800,3000	
<i>Anthropoides virgo</i>	Demoiselle Crane	B	EN	A2bcd+3bcd+4bcd	Decreasing	9300-11900,10500	
<i>Grus grus</i>	Common Crane	B	LC		Increasing	309000-423000,362000	
<i>Chlamydotis macqueenii</i>	Asian Houbara	B	CR (PE)	D	Decreasing	0-0,0	
<i>Chlamydotis undulata</i>	African Houbara	B	VU	D1	Increasing	610-620,620	
<i>Otis tarda</i>	Great Bustard	B	LC		Decreasing	35200-41800,38300	
<i>Tetrax tetrax</i>	Little Bustard	B	VU	A2bcde+4bcde	Decreasing	194000-280000,228000	
<i>Actitis hypoleucos</i>	Common Sandpiper	B	LC		Decreasing	2060000-2980000,2460000	
<i>Arenaria interpres</i>	Ruddy Turnstone	W	LC		Stable	57200-67300,61400	
<i>Burhinus oediconemus</i>	Eurasian Thick-knee	B	LC		Decreasing	123000-193000,152000	
<i>Calidris alba</i>	Sanderling	W	LC		Increasing	50200-66800,57400	
<i>Calidris alpina</i>	Dunlin	W	LC		Stable	865000-1050000,937000	
<i>Calidris bairdii</i>	Baird's Sandpiper	B	LC ^{oo}		Unknown	200-1000,450	
<i>Calidris canutus</i>	Red Knot	W	LC		Decreasing	268000-325000,296000	
<i>Calidris falcinellus</i>	Broad-billed Sandpiper	B	VU	A2bc+3bc+4bc	Decreasing	40500-70700,52500	
<i>Calidris ferruginea</i>	Curlew Sandpiper	W	VU	D1	Increasing	100-1100,420	
<i>Calidris maritima</i>	Purple Sandpiper	W	LC		Unknown	179000-196000,185000	
<i>Calidris minuta</i>	Little Stint	B	LC		Unknown	80200-122000,98400	
<i>Calidris pugnax</i>	Ruff	B	NT	A2abcde+3bcde+4abcde	Decreasing	513000-1380000,841000	
<i>Calidris temminckii</i>	Temminck's Stint	B	LC		Unknown	166000-248000,203000	
<i>Charadrius alexandrinus</i>	Kentish Plover	B	LC		Decreasing	34900-67400,46600	
<i>Charadrius asiaticus</i>	Caspian Plover	B	EN ^o	D	Unknown	6-60,25	
<i>Charadrius dubius</i>	Little Ringed Plover	B	LC		Decreasing	425000-634000,513000	
<i>Charadrius hiaticula</i>	Common Ringed Plover	B	LC		Increasing	261000-399000,323000	
<i>Charadrius leschenaultii</i>	Greater Sandplover	B	NT	D1	Decreasing	1300-2400,1700	
<i>Cursorius cursor</i>	Cream-coloured Courser	B	NT	D1	Unknown	1300-1600,1400	
<i>Eudromias morinellus</i>	Eurasian Dotterel	B	LC		Unknown	21100-43100,31300	
<i>Gallinago gallinago</i>	Common Snipe	B	VU	A2bcde+3bcde+4bcde	Decreasing	5270000-7260000,6160000	

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<i>Gallinago media</i>	Great Snipe	B	LC		Decreasing	104000-181000,136000	
<i>Gallinago megala</i>	Swinhoe's Snipe	B	NT ⁰⁰⁰	D1	Unknown	20-60,35	
<i>Gallinago stenura</i>	Pintail Snipe	B	LC		Unknown	20000-38000,27600	
<i>Glareola nordmanni</i>	Black-winged Pratincole	B	LC		Stable	12000-24200,17000	
<i>Glareola pratincola</i>	Collared Pratincole	B	LC		Decreasing	17500-35000,23800	
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	B	VU	A4abcde	Decreasing	526000-692000,598000	
<i>Himantopus himantopus</i>	Black-winged Stilt	B	LC		Increasing	101000-269000,158000	
<i>Limosa lapponica</i>	Bar-tailed Godwit	W	LC		Stable	98600-119000,108000	
<i>Limosa limosa</i>	Black-tailed Godwit	B	NT	A2bcde	Stable	272000-334000,300000	
<i>Lymnocyrtes minimus</i>	Jack Snipe	B	LC		Unknown	30500-77700,51100	
<i>Numenius arquata</i>	Eurasian Curlew	B	NT	A2bcde+4bcde	Decreasing	405000-553000,470000	
<i>Numenius phaeopus</i>	Whimbrel	B	LC		Unknown	674000-774000,719000	
<i>Numenius tenuirostris</i>	Slender-billed Curlew	W	CR (PE)	D	N/A	0-0,0	
<i>Phalaropus fulicarius</i>	Red Phalarope	B	LC		Unknown	30400-62200,43400	
<i>Phalaropus lobatus</i>	Red-necked Phalarope	B	LC		Unknown	551000-834000,678000	
<i>Pluvialis apricaria</i>	Eurasian Golden Plover	B	LC		Stable	1660000-2310000,1960000	Yes*
<i>Pluvialis squatarola</i>	Grey Plover	W	LC		Stable	84800-119000,95100	
<i>Recurvirostra avosetta</i>	Pied Avocet	B	LC		Decreasing	81200-155000,95300	
<i>Scolopax rusticola</i>	Eurasian Woodcock	B	LC		Decreasing	9790000-13500000,11500000	
<i>Tringa erythropus</i>	Spotted Redshank	B	LC		Unknown	37900-81300,56300	
<i>Tringa glareola</i>	Wood Sandpiper	B	LC		Unknown	2090000-2920000,2480000	
<i>Tringa nebularia</i>	Common Greenshank	B	LC		Increasing	452000-942000,646000	
<i>Tringa ochropus</i>	Green Sandpiper	B	LC		Unknown	1180000-1850000,1470000	
<i>Tringa stagnatilis</i>	Marsh Sandpiper	B	LC		Decreasing	18200-28800,22900	
<i>Tringa totanus</i>	Common Redshank	B	VU	A2bcde+4bcde	Decreasing	522000-694000,596000	
<i>Vanellus gregarius</i>	Sociable Lapwing	B	CR	A2bcde+3bcde+4bcde; C1+2a(i,ii); D	Decreasing	6-20,11	
<i>Vanellus indicus</i>	Red-wattled Lapwing	B	VU ⁰⁰	D1	Unknown	40-60,49	
<i>Vanellus leucurus</i>	White-tailed Lapwing	B	LC		Stable	2200-20400,6600	
<i>Vanellus spinosus</i>	Spur-winged Lapwing	B	LC		Unknown	2100-3300,2700	
<i>Vanellus vanellus</i>	Northern Lapwing	B	VU	A2bcde	Decreasing	3180000-4590000,3820000	
<i>Xenus cinereus</i>	Terek Sandpiper	B	LC		Decreasing	80300-121000,98400	
<i>Catharacta skua</i>	Great Skua	B	LC		Increasing	25800-30000,27600	Yes
<i>Stercorarius longicaudus</i>	Long-tailed Jaeger	B	LC		Fluctuating	73200-161000,112000	
<i>Stercorarius parasiticus</i>	Arctic Jaeger	B	EN	A4bcde	Decreasing	54200-83000,66000	
<i>Stercorarius pomarinus</i>	Pomarine Jaeger	B	LC		Unknown	5000-8100,6300	
<i>Hydrocoloeus minutus</i>	Little Gull	B	LC		Unknown	64300-125000,88900	
<i>Larus argentatus</i>	European Herring Gull	B	LC		Decreasing	1060000-1220000,1130000	Yes
<i>Larus armenicus</i>	Armenian Gull	B	LC		Unknown	44400-71800,56000	Yes
<i>Larus audouinii</i>	Audouin's Gull	B	VU	A3bce+4abce	Decreasing	31400-42000,36300	Yes
<i>Larus cachinnans</i>	Caspian Gull	B	LC		Increasing	231000-400000,303000	
<i>Larus canus</i>	Mew Gull	B	LC		Unknown	1920000-2600000,2250000	
<i>Larus fuscus</i>	Lesser Black-backed Gull	B	LC		Increasing	738000-828000,781000	
<i>Larus genei</i>	Slender-billed Gull	B	VU	A4bcde	Decreasing	61100-73200,66300	
<i>Larus glaucoides</i>	Iceland Gull	B	LC		Stable	100000-200000,141000	
<i>Larus hyperboreus</i>	Glaucous Gull	B	LC		Stable	69200-246000,125000	
<i>Larus ichthyaetus</i>	Pallas's Gull	B	LC		Increasing	34700-56300,43900	
<i>Larus marinus</i>	Great Black-backed Gull	B	LC		Stable	172000-215000,196000	
<i>Larus melanocephalus</i>	Mediterranean Gull	B	LC		Decreasing	128000-203000,160000	Yes
<i>Larus michahellis</i>	Yellow-legged Gull	B	LC		Unknown	830000-1110000,947000	Yes
<i>Larus ridibundus</i>	Black-headed Gull	B	LC		Decreasing	2810000-4120000,3380000	
<i>Onychoprion fuscatus</i>	Sooty Tern	B	VU ⁰⁰	D1	Unknown	2-2,2	
<i>Pagophila eburnea</i>	Ivory Gull	B	VU	C1	Decreasing	8600-11600,9900	
<i>Rhodostethia rosea</i>	Ross's Gull	B	EN ⁰	D	Fluctuating	10-10,10	
<i>Rissa tridactyla</i>	Black-legged Kittiwake	B	VU	A2abcd+3bcd+4abcd	Decreasing	3250000-3450000,3330000	
<i>Xema sabini</i>	Sabine's Gull	B	LC		Increasing	2000-2100,2000	
<i>Gelochelidon nilotica</i>	Common Gull-billed Tern	B	LC		Stable	26700-37400,30900	
<i>Hydroprogne caspia</i>	Caspian Tern	B	LC		Stable	12700-19900,15700	
<i>Sterna dougallii</i>	Roseate Tern	B	LC		Increasing	4900-6200,5500	
<i>Sterna hirundo</i>	Common Tern	B	LC		Unknown	881000-1430000,1120000	
<i>Sterna paradisaea</i>	Arctic Tern	B	LC		Stable	1060000-1510000,1220000	
<i>Sternula albifrons</i>	Little Tern	B	LC		Decreasing	66800-101000,81600	

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<i>Thalasseus sandvicensis</i>	Sandwich Tern	B	LC		Increasing	160000-320000,258000	
<i>Chlidonias hybrida</i>	Whiskered Tern	B	LC		Increasing	117000-294000,177000	
<i>Chlidonias leucopterus</i>	White-winged Tern	B	LC		Unknown	176000-432000,262000	
<i>Chlidonias niger</i>	Black Tern	B	LC		Unknown	225000-355000,280000	
<i>Alca torda</i>	Razorbill	B	LC		Increasing	519000-1070000,763000	Yes
<i>Alle alle</i>	Little Auk	B	LC		Unknown	76000000-77000000,76400000	
<i>Cephus grylle</i>	Black Guillemot	B	LC		Unknown	368000-397000,380000	
<i>Fratercula arctica</i>	Atlantic Puffin	B	EN	A2abcde+4abcde	Decreasing	7400000-8240000,7820000	Yes
<i>Uria aalge</i>	Common Murre	B	LC		Increasing	2990000-4430000,3660000	
<i>Uria lomvia</i>	Thick-billed Murre	B	LC		Decreasing	3410000-4560000,3950000	
<i>Pterocles alchata</i>	Pin-tailed Sandgrouse	B	LC		Stable	15000-18800,16600	
<i>Pterocles orientalis</i>	Black-bellied Sandgrouse	B	EN	A2bcde+4bcde	Decreasing	14900-37700,24300	
<i>Syrnhaptes paradoxus</i>	Pallas's Sandgrouse	B	RE		N/A	0-0,0	
<i>Columba bollii</i>	Dark-tailed Laurel-pigeon	B	LC		Unknown	2500-10000,5000	Yes
<i>Columba junoniae</i>	White-tailed Laurel-pigeon	B	NT	B1ab(iii)+2ab(iii)	Unknown	1000-2500,1600	Yes
<i>Columba livia</i>	Rock Dove	B	LC		Unknown	6840000-14200000,9710000	
<i>Columba oenas</i>	Stock Dove	B	LC		Increasing	1360000-2290000,1700000	Yes
<i>Columba palumbus</i>	Common Woodpigeon	B	LC		Increasing	41400000-57600000,48400000	Yes
<i>Columba trocaz</i>	Madeira Laurel-pigeon	B	LC		Increasing	10000-14000,11800	Yes
<i>Spilopelia senegalensis</i>	Laughing Dove	B	LC		Increasing	141000-328000,210000	
<i>Streptopelia decaocto</i>	Eurasian Collared-dove	B	LC		Stable	17900000-44100000,25500000	
<i>Streptopelia turtur</i>	European Turtle-dove	B	VU	A2bcde+4bcde	Decreasing	5020000-9510000,6900000	
<i>Clamator glandarius</i>	Great Spotted Cuckoo	B	VU	A2bcd+3bcd+4bcd	Decreasing	293000-316000,301000	
<i>Cuculus canorus</i>	Common Cuckoo	B	LC		Decreasing	8640000-13600000,10800000	
<i>Cuculus optatus</i>	Oriental Cuckoo	B	LC		Unknown	240000-310000,273000	
<i>Aegolius funereus</i>	Boreal Owl	B	LC		Fluctuating	189000-471000,288000	
<i>Asio flammeus</i>	Short-eared Owl	B	LC		Fluctuating	169000-284000,215000	
<i>Asio otus</i>	Northern Long-eared Owl	B	LC		Unknown	624000-1030000,788000	
<i>Athene noctua</i>	Little Owl	B	LC		Unknown	1150000-2140000,1560000	
<i>Bubo bubo</i>	Eurasian Eagle-owl	B	LC		Increasing	37100-59500,45900	
<i>Bubo scandiacus</i>	Snowy Owl	B	LC		Fluctuating	2400-5400,3500	
<i>Glaucidium passerinum</i>	Eurasian Pygmy-owl	B	LC		Stable	165000-313000,230000	
<i>Ketupa zeylonensis</i>	Brown Fish-owl	B	EN	D	Unknown	100-160,130	
<i>Otus brucei</i>	Pallid Scops-owl	B	EN	D	Stable	100-500,220	
<i>Otus cypricus</i>	Cyprus Scops-owl	B	LC		Stable	6000-10000,7700	Yes
<i>Otus scops</i>	Eurasian Scops-owl	B	LC		Stable	447000-749000,566000	
<i>Strix aluco</i>	Tawny Owl	B	LC		Stable	1260000-1870000,1520000	
<i>Strix nebulosa</i>	Great Grey Owl	B	LC		Stable	12400-19900,15700	
<i>Strix uralensis</i>	Ural Owl	B	LC		Increasing	160000-263000,203000	
<i>Surnia ulula</i>	Northern Hawk-owl	B	LC		Increasing	20800-92400,36800	
<i>Tyto alba</i>	Common Barn-owl	B	LC		Decreasing	164000-356000,239000	
<i>Caprimulgus europaeus</i>	European Nightjar	B	LC		Unknown	1190000-2220000,1620000	
<i>Caprimulgus ruficollis</i>	Red-necked Nightjar	B	NT	A2bc+3bc+4bc	Decreasing	202000-270000,233000	
<i>Apus affinis</i>	Little Swift	B	NT	A2bc; C1	Decreasing	1500-4800,2700	
<i>Apus apus</i>	Common Swift	B	NT	A2bc+3bc+4bc	Decreasing	32200000-56700000,41700000	
<i>Apus caffer</i>	White-rumped Swift	B	NT°	D1	Increasing	500-700,590	
<i>Apus pallidus</i>	Pallid Swift	B	LC		Unknown	152000-424000,230000	
<i>Apus unicolor</i>	Plain Swift	B	LC		Unknown	15000-40000,24100	Yes
<i>Tachymarptis melba</i>	Alpine Swift	B	LC		Unknown	647000-1460000,960000	
<i>Upupa epops</i>	Common Hoopoe	B	LC		Stable	2740000-6410000,4030000	
<i>Alcedo atthis</i>	Common Kingfisher	B	LC		Decreasing	179000-440000,270000	
<i>Ceryle rudis</i>	Pied Kingfisher	B	VU	D1	Decreasing	600-1000,770	
<i>Halcyon smyrnensis</i>	White-breasted Kingfisher	B	VU	D1	Decreasing	300-500,390	
<i>Coracias garrulus</i>	European Roller	B	LC		Decreasing	102000-208000,138000	
<i>Merops apiaster</i>	European Bee-eater	B	LC		Stable	7370000-11200000,8970000	
<i>Merops persicus</i>	Blue-cheeked Bee-eater	B	LC		Increasing	16900-55600,30400	
<i>Dendrocopos leucotos</i>	White-backed Woodpecker	B	LC		Decreasing	420000-822000,585000	

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<i>Dendrocopos major</i>	Great Spotted Woodpecker	B	LC		Decreasing	17200000-27300000,21500000	
<i>Dendrocopos syriacus</i>	Syrian Woodpecker	B	LC		Unknown	645000-1540000,988000	
<i>Dryobates minor</i>	Lesser Spotted Woodpecker	B	LC		Increasing	1510000-3020000,2130000	
<i>Dryocopus martius</i>	Black Woodpecker	B	LC		Unknown	1240000-2270000,1670000	
<i>Jynx torquilla</i>	Eurasian Wryneck	B	LC		Stable	1590000-3040000,2190000	
<i>Leiopicus medius</i>	Middle Spotted Woodpecker	B	LC		Increasing	802000-1390000,1050000	Yes
<i>Picoides tridactylus</i>	Three-toed Woodpecker	B	LC		Unknown	603000-1120000,816000	
<i>Picus canus</i>	Grey-faced Woodpecker	B	LC		Increasing	365000-609000,470000	
<i>Picus sharpei</i>	Iberian Green Woodpecker	B	LC		Decreasing	488000-938000,671000	Yes
<i>Picus viridis</i>	Eurasian Green Woodpecker	B	LC		Stable	1200000-2050000,1560000	Yes
<i>Panurus biarmicus</i>	Bearded Reedling	B	LC		Increasing	343000-783000,496000	
<i>Alauda arvensis</i>	Eurasian Skylark	B	LC		Decreasing	87800000-132000000,106000000	
<i>Alauda leucoptera</i>	White-winged Lark	B	LC		Stable	40000-110000,66300	
<i>Alauda rufescens</i>	Lesser Short-toed Lark	B	LC		Decreasing	1700000-3070000,2250000	
<i>Ammomanes deserti</i>	Desert Lark	B	EN	D	Decreasing	40-200,90	
<i>Calandrella brachydactyla</i>	Greater Short-toed Lark	B	LC		Unknown	9300000-17400000,12700000	
<i>Chersophilus duponti</i>	Dupont's Lark	B	VU	A2bc+3bc+4bc; C1+2a(i)	Decreasing	4600-4700,4700	
<i>Eremophila alpestris</i>	Horned Lark	B	LC		Unknown	4130000-12300000,7090000	
<i>Galerida cristata</i>	Crested Lark	B	LC		Decreasing	34300000-47500000,39900000	
<i>Galerida theklae</i>	Thekla's Lark	B	LC		Increasing	3500000-5690000,4380000	
<i>Lullula arborea</i>	Woodlark	B	LC		Decreasing	4290000-9130000,6010000	Yes
<i>Melanocorypha bimaculata</i>	Bimaculated Lark	B	LC		Unknown	2000000-4020000,2840000	
<i>Melanocorypha calandra</i>	Calandra Lark	B	LC		Decreasing	19800000-38400000,27500000	
<i>Melanocorypha yeltoniensis</i>	Black Lark	B	EN	D	Decreasing	60-150,90	
<i>Cecropis daurica</i>	Red-rumped Swallow	B	LC		Increasing	2860000-6680000,4450000	
<i>Delichon urbicum</i>	Northern House Martin	B	LC		Stable	23000000-48100000,33000000	
<i>Hirundo rustica</i>	Barn Swallow	B	LC		Decreasing	51900000-89500000,66500000	
<i>Ptyonoprogne rupestris</i>	Eurasian Crag Martin	B	LC		Stable	420000-816000,562000	
<i>Riparia riparia</i>	Collared Sand Martin	B	LC		Decreasing	13400000-19800000,15900000	
<i>Anthus berthelotii</i>	Berthelot's Pipit	B	LC		Unknown	60000-300000,134000	Yes
<i>Anthus campestris</i>	Tawny Pipit	B	LC		Unknown	2240000-4050000,2980000	
<i>Anthus cervinus</i>	Red-throated Pipit	B	LC		Unknown	2210000-4240000,3060000	
<i>Anthus gustavi</i>	Pechora Pipit	B	CR (PE)	D	N/A	0-0,0	
<i>Anthus hodgsoni</i>	Olive-backed Pipit	B	LC		Unknown	160000-280000,212000	
<i>Anthus petrosus</i>	Rock Pipit	B	LC		Unknown	334000-571000,433000	Yes
<i>Anthus pratensis</i>	Meadow Pipit	B	LC		Decreasing	22000000-29800000,25100000	Yes
<i>Anthus spinoletta</i>	Water Pipit	B	LC		Decreasing	2100000-5280000,3110000	
<i>Anthus trivialis</i>	Tree Pipit	B	LC		Decreasing	38900000-70100000,52000000	
<i>Motacilla alba</i>	White Wagtail	B	LC		Stable	30300000-51100000,39000000	
<i>Motacilla cinerea</i>	Grey Wagtail	B	LC		Stable	2240000-4750000,3260000	
<i>Motacilla citreola</i>	Citrine Wagtail	B	LC		Increasing	803000-1150000,963000	
<i>Motacilla flava</i>	Western Yellow Wagtail	B	LC		Decreasing	26700000-36000000,30800000	
<i>Cinclus cinclus</i>	White-throated Dipper	B	LC		Decreasing	222000-547000,335000	
<i>Bombycilla garrulus</i>	Bohemian Waxwing	B	LC		Increasing	1300000-2540000,1820000	
<i>Prunella atrogularis</i>	Black-throated Accentor	B	LC		Unknown	3000-4800,3800	
<i>Prunella collaris</i>	Alpine Accentor	B	LC		Stable	203000-379000,271000	
<i>Prunella modularis</i>	Dunnock	B	LC		Decreasing	22100000-37000000,26800000	
<i>Prunella montanella</i>	Siberian Accentor	B	LC		Unknown	24400-46000,33500	
<i>Prunella ocularis</i>	Radde's Accentor	B	LC		Unknown	29800-76300,47200	
<i>Calliope calliope</i>	Siberian Rubythroat	B	LC		Unknown	1800-3200,2400	
<i>Cercotrichas galactotes</i>	Rufous-tailed Scrub-robin	B	LC		Decreasing	270000-775000,456000	

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<i>Cyanecula svecica</i>	Bluethroat	B	LC		Stable	7930000-14800000,10900000	
<i>Erithacus rubecula</i>	European Robin	B	LC		Stable	109000000-168000000,133000000	Yes
<i>Irania gutturalis</i>	White-throated Robin	B	LC		Unknown	809000-1820000,1210000	
<i>Luscinia luscinia</i>	Thrush Nightingale	B	LC		Increasing	8790000-14300000,11100000	
<i>Luscinia megarhynchos</i>	Common Nightingale	B	LC		Stable	20400000-30700000,24800000	
<i>Monticola saxatilis</i>	Rufous-tailed Rock-thrush	B	LC		Unknown	179000-572000,310000	
<i>Monticola solitarius</i>	Blue Rock-thrush	B	LC		Unknown	201000-463000,301000	
<i>Oenanthe chrysopygia</i>	Red-tailed Wheatear	B	VU ⁰	D1	Stable	90-120,100	
<i>Oenanthe cyprica</i>	Cyprus Wheatear	B	LC		Increasing	100000-200000,141000	Yes
<i>Oenanthe deserti</i>	Desert Wheatear	B	NT ⁰	D1	Unknown	220-2200,700	
<i>Oenanthe finschii</i>	Finsch's Wheatear	B	LC		Unknown	204000-617000,354000	
<i>Oenanthe hispanica</i>	Black-eared Wheatear	B	LC		Unknown	2530000-7250000,4280000	
<i>Oenanthe isabellina</i>	Isabelline Wheatear	B	LC		Unknown	4620000-13200000,7740000	
<i>Oenanthe leucura</i>	Black Wheatear	B	LC		Stable	8100-32200,13000	
<i>Oenanthe oenanthe</i>	Northern Wheatear	B	LC		Unknown	10800000-29300000,17500000	
<i>Oenanthe pleschanka</i>	Pied Wheatear	B	LC		Unknown	54500-99700,70400	
<i>Oenanthe xanthopyrna</i>	Kurdish Wheatear	B	LC		Unknown	2000-12000,4600	
<i>Phoenicurus erythrogastrus</i>	White-winged Redstart	B	NT	C1	Decreasing	3400-15000,6600	
<i>Phoenicurus ochruros</i>	Black Redstart	B	LC		Stable	13100000-21300000,16600000	
<i>Phoenicurus phoenicurus</i>	Common Redstart	B	LC		Increasing	10500000-19600000,14400000	
<i>Saxicola dacotiae</i>	Fuerteventura Stonechat	B	NT	B1ab(ii,iii); C2a(ii)	Unknown	13300-15500,14400	Yes
<i>Saxicola rubetra</i>	Whinchat	B	LC		Decreasing	15400000-21100000,18100000	Yes
<i>Saxicola torquatus</i>	Common Stonechat	B	LC		Decreasing	11800000-18400000,14600000	
<i>Tarsiger cyanurus</i>	Orange-flanked Bush-robin	B	LC		Increasing	481000-892000,653000	
<i>Turdus atrogularis</i>	Black-throated Thrush	B	LC		Unknown	50000-80000,63200	
<i>Turdus iliacus</i>	Redwing	B	LC		Decreasing	16200000-28100000,21300000	
<i>Turdus merula</i>	Eurasian Blackbird	B	LC		Increasing	116000000-176000000,140000000	
<i>Turdus philomelos</i>	Song Thrush	B	LC		Stable	47300000-77900000,59700000	
<i>Turdus pilaris</i>	Fieldfare	B	LC		Stable	23000000-44700000,32000000	
<i>Turdus torquatus</i>	Ring Ouzel	B	LC		Stable	552000-1160000,779000	Yes
<i>Turdus viscivorus</i>	Mistle Thrush	B	LC		Stable	7300000-13600000,9720000	
<i>Zoothera aurea</i>	White's Thrush	B	LC		Unknown	20000-34000,26100	
<i>Acrocephalus agricola</i>	Paddyfield Warbler	B	LC		Stable	466000-703000,568000	
<i>Acrocephalus arundinaceus</i>	Great Reed-warbler	B	LC		Stable	4760000-8880000,6410000	
<i>Acrocephalus dumetorum</i>	Blyth's Reed-warbler	B	LC		Increasing	6240000-10900000,8210000	
<i>Acrocephalus melanopogon</i>	Moustached Warbler	B	LC		Stable	73800-188000,110000	
<i>Acrocephalus paludicola</i>	Aquatic Warbler	B	VU	B2ab(i,ii,iii,iv,v)	Decreasing	18300-28500,22700	Yes
<i>Acrocephalus palustris</i>	Marsh Warbler	B	LC		Unknown	11700000-17000000,14100000	Yes
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	B	LC		Unknown	9170000-13700000,11000000	
<i>Acrocephalus scirpaceus</i>	Common Reed-warbler	B	LC		Stable	3890000-6630000,5060000	
<i>Cettia cetti</i>	Cetti's Warbler	B	LC		Stable	4080000-6550000,5110000	
<i>Cisticola juncidis</i>	Zitting Cisticola	B	LC		Stable	2270000-3680000,2750000	
<i>Hippolais icterina</i>	Icterine Warbler	B	LC		Decreasing	4720000-8430000,6270000	Yes
<i>Hippolais languida</i>	Upcher's Warbler	B	LC		Unknown	36800-90200,55900	
<i>Hippolais olivetorum</i>	Olive-tree Warbler	B	LC		Stable	21500-47700,31800	Yes
<i>Hippolais polyglotta</i>	Melodious Warbler	B	LC		Increasing	4270000-7070000,5210000	Yes
<i>Iduna caligata</i>	Booted Warbler	B	LC		Increasing	800000-1010000,896000	
<i>Iduna opaca</i>	Isabelline Warbler	B	LC		Stable	10000-10000,10000	
<i>Iduna pallida</i>	Olivaceous Warbler	B	LC		Unknown	6510000-13600000,9360000	

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<i>Iduna rama</i>	Sykes's Warbler	B	LC		Unknown	8000-14100,10600	
<i>Locustella fluviatilis</i>	River Warbler	B	LC		Decreasing	2780000-4960000,3670000	Yes
<i>Locustella lanceolata</i>	Lanceolated Warbler	B	LC		Unknown	40000-60000,49000	
<i>Locustella luscinioides</i>	Savi's Warbler	B	LC		Unknown	749000-1310000,981000	
<i>Locustella naevia</i>	Common Grasshopper-warbler	B	LC		Decreasing	1270000-2250000,1660000	
<i>Phylloscopus bonelli</i>	Western Bonelli's Warbler	B	LC		Increasing	4800000-6360000,5490000	Yes
<i>Phylloscopus borealis</i>	Arctic Warbler	B	LC		Increasing	6000000-8010000,6930000	
<i>Phylloscopus canariensis</i>	Canary Islands Chiffchaff	B	LC		Unknown	40000-200000,89400	Yes
<i>Phylloscopus collybita</i>	Common Chiffchaff	B	LC		Stable	72100000-114000000,89400000	
<i>Phylloscopus ibericus</i>	Iberian Chiffchaff	B	LC		Stable	924000-1540000,1190000	Yes
<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	B	LC		Unknown	40000-60000,49000	
<i>Phylloscopus nitidus</i>	Green Warbler	B	LC		Increasing	935000-1870000,1320000	
<i>Phylloscopus orientalis</i>	Eastern Bonelli's Warbler	B	LC		Unknown	58500-196000,105000	Yes
<i>Phylloscopus sibilatrix</i>	Wood Warbler	B	LC		Decreasing	16200000-28500000,21400000	Yes
<i>Phylloscopus sindianus</i>	Mountain Chiffchaff	B	LC		Unknown	213000-644000,298000	
<i>Phylloscopus trochiloides</i>	Greenish Warbler	B	LC		Increasing	8080000-15300000,11100000	
<i>Phylloscopus trochilus</i>	Willow Warbler	B	LC		Decreasing	106000000-161000000,130000000	
<i>Prinia gracilis</i>	Graceful Prinia	B	LC		Unknown	2000-8000,4000	
<i>Sylvia atricapilla</i>	Eurasian Blackcap	B	LC		Increasing	88400000-138000000,108000000	Yes
<i>Curruca balearica</i>	Balearic Warbler	B	LC		Stable	28000-50000,37400	Yes
<i>Sylvia borin</i>	Garden Warbler	B	LC		Decreasing	23200000-38900000,30200000	Yes
<i>Curruca cantillans</i>	Subalpine Warbler	B	LC		Increasing	7040000-10700000,8490000	Yes
<i>Curruca communis</i>	Common Whitethroat	B	LC		Increasing	39200000-59200000,47800000	
<i>Curruca conspicillata</i>	Spectacled Warbler	B	LC		Stable	327000-891000,535000	
<i>Curruca crassirostris</i>	Eastern Orphean Warbler	B	LC		Unknown	131000-411000,231000	
<i>Curruca curruca</i>	Lesser Whitethroat	B	LC		Stable	9750000-16700000,12600000	
<i>Curruca hortensis</i>	Western Orphean Warbler	B	LC		Increasing	247000-493000,349000	
<i>Curruca melanocephala</i>	Sardinian Warbler	B	LC		Stable	15400000-32100000,21400000	
<i>Curruca melanothorax</i>	Cyprus Warbler	B	LC		Stable	120000-180000,147000	Yes
<i>Curruca mystacea</i>	Menetries's Warbler	B	LC		Increasing	107000-254000,162000	
<i>Curruca nana</i>	Asian Desert Warbler	B	VU ⁰	D1	Unknown	80-140,110	
<i>Curruca nisoria</i>	Barred Warbler	B	LC		Increasing	1150000-2110000,1530000	
<i>Curruca ruppeli</i>	Rüppel's Warbler	B	LC		Unknown	206000-1030000,458000	Yes
<i>Curruca sarda</i>	Marmora's Warbler	B	LC		Unknown	120000-130000,124000	Yes
<i>Curruca subalpina</i>	Moltoni's Warbler	B	LC		Increasing	102000-265000,164000	Yes
<i>Curruca undata</i>	Dartford Warbler	B	NT	A2bc+3bc+4bc	Decreasing	1190000-2860000,1750000	Yes
<i>Regulus ignicapilla</i>	Common Firecrest	B	LC		Increasing	9120000-16300000,12100000	Yes
<i>Regulus madeirensis</i>	Madeira Firecrest	B	LC		Increasing	100000-200000,141000	Yes
<i>Regulus regulus</i>	Goldcrest	B	LC		Decreasing	29100000-50400000,37400000	
<i>Troglodytes troglodytes</i>	Northern Wren	B	LC		Increasing	66500000-113000000,80200000	
<i>Ficedula albicollis</i>	Collared Flycatcher	B	LC		Stable	3210000-5130000,4010000	Yes
<i>Ficedula hypoleuca</i>	European Pied Flycatcher	B	LC		Decreasing	15500000-24900000,19600000	Yes
<i>Ficedula parva</i>	Red-breasted Flycatcher	B	LC		Increasing	3590000-6870000,4930000	Yes
<i>Ficedula semitorquata</i>	Semi-collared Flycatcher	B	LC		Unknown	60300-297000,123000	Yes
<i>Muscicapa striata</i>	Spotted Flycatcher	B	LC		Decreasing	20600000-37400000,27900000	
<i>Aegithalos caudatus</i>	Long-tailed Tit	B	LC		Stable	16300000-29200000,21500000	
<i>Cyanistes caeruleus</i>	Eurasian Blue Tit	B	LC		Increasing	59700000-95100000,73400000	Yes
<i>Cyanistes cyanus</i>	Azure Tit	B	NT	C1	Decreasing	5000-15700,8800	
<i>Cyanistes teneriffae</i>	African Blue Tit	B	LC		Unknown	40600-201000,90100	

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<i>Lophophanes cristatus</i>	Crested Tit	B	LC		Decreasing	9230000-16500000,12100000	Yes
<i>Parus major</i>	Great Tit	B	LC		Stable	127000000-205000000,158000000	
<i>Periparus ater</i>	Coal Tit	B	LC		Stable	31500000-55700000,40600000	
<i>Poecile cinctus</i>	Siberian Tit	B	LC		Decreasing	507000-1100000,755000	
<i>Poecile hyrcanus</i>	Caspian Tit	B	LC		Stable	1000-5000,2200	
<i>Poecile lugubris</i>	Sombre Tit	B	LC		Unknown	902000-2670000,1550000	Yes
<i>Poecile montanus</i>	Willow Tit	B	LC		Decreasing	14000000-25400000,18800000	
<i>Poecile palustris</i>	Marsh Tit	B	LC		Stable	7480000-13300000,9850000	
<i>Remiz pendulinus</i>	Eurasian Penduline-tit	B	LC		Increasing	518000-940000,689000	
<i>Sitta europaea</i>	Eurasian Nuthatch	B	LC		Stable	19000000-34700000,25100000	
<i>Sitta krueperi</i>	Krueper's Nuthatch	B	LC		Unknown	256000-944000,485000	Yes
<i>Sitta neumayer</i>	Western Rock Nuthatch	B	LC		Unknown	2030000-10200000,4540000	Yes
<i>Sitta tephronota</i>	Eastern Rock Nuthatch	B	LC		Unknown	33400-107000,59300	
<i>Sitta whiteheadi</i>	Corsican Nuthatch	B	VU	C2a(ii)	Decreasing	3000-4400,3800	Yes
<i>Tichodroma muraria</i>	Wallcreeper	B	LC		Unknown	26300-96900,48800	
<i>Certhia brachydactyla</i>	Short-toed Treecreeper	B	LC		Increasing	10100000-16800000,12900000	Yes
<i>Certhia familiaris</i>	Eurasian Treecreeper	B	LC		Increasing	10900000-19200000,14400000	
<i>Lanius collurio</i>	Red-backed Shrike	B	LC		Decreasing	16400000-26000000,20400000	
<i>Lanius excubitor</i>	Great Grey Shrike	B	LC		Decreasing	128000-250000,175000	
<i>Lanius meridionalis</i>	Iberian Grey Shrike	B	VU	A2abc+3bc+4abc	Decreasing	721000-1220000,932000	Yes
<i>Lanius minor</i>	Lesser Grey Shrike	B	LC		Decreasing	752000-1610000,1060000	
<i>Lanius nubicus</i>	Masked Shrike	B	LC		Unknown	72400-213000,124000	
<i>Lanius senator</i>	Woodchat Shrike	B	NT	A2bcde+3bcde+4bcde	Decreasing	3860000-6240000,4890000	
<i>Pycnonotus xanthopygos</i>	White-spectacled Bulbul	B	LC		Unknown	12000-36000,20800	
<i>Argya altirostris</i>	Iraq Babbler	B	NT ⁰⁰	D1	Unknown	80-160,110	
<i>Corvus corax</i>	Common Raven	B	LC		Increasing	1170000-3570000,1720000	
<i>Corvus corone</i>	Carrion Crow	B	LC		Stable	16200000-27500000,20800000	
<i>Corvus frugilegus</i>	Rook	B	VU	A2bcde+4bcde	Decreasing	11400000-21300000,15000000	
<i>Corvus monedula</i>	Eurasian Jackdaw	B	LC		Increasing	17800000-36200000,24700000	
<i>Cyanopica cooki</i>	Iberian Azure-winged Magpie	B	LC		Increasing	713000-1800000,1080000	Yes
<i>Garrulus glandarius</i>	Eurasian Jay	B	LC		Stable	12000000-23100000,16400000	
<i>Nucifraga caryocatactes</i>	Northern Nutcracker	B	LC		Stable	596000-1220000,846000	
<i>Perisoreus infaustus</i>	Siberian Jay	B	LC		Unknown	426000-830000,615000	
<i>Pica pica</i>	Eurasian Magpie	B	LC		Stable	19300000-31300000,24100000	
<i>Pyrrhocorax graculus</i>	Yellow-billed Chough	B	LC		Unknown	218000-550000,340000	
<i>Pyrrhocorax pyrrhocorax</i>	Red-billed Chough	B	LC		Unknown	84600-197000,120000	
<i>Pastor roseus</i>	Rosy Starling	B	LC		Fluctuating	101000-403000,187000	
<i>Sturnus unicolor</i>	Spotless Starling	B	LC		Stable	47700000-61400000,54100000	Yes
<i>Sturnus vulgaris</i>	Common Starling	B	LC		Stable	53300000-94400000,69900000	
<i>Oriolus oriolus</i>	Eurasian Golden Oriole	B	LC		Stable	8740000-14600000,11200000	
<i>Carpospiza brachydactyla</i>	Pale Sparrow	B	LC		Stable	12700-24100,17300	
<i>Gymnoris xanthocollis</i>	Chestnut-shouldered Bush-sparrow	B	LC		Unknown	1000-4000,2000	
<i>Montifringilla nivalis</i>	White-winged Snowfinch	B	LC		Unknown	255000-1120000,526000	
<i>Passer domesticus</i>	House Sparrow	B	LC		Decreasing	270000000-378000000,316000000	
<i>Passer hispaniolensis</i>	Spanish Sparrow	B	LC		Unknown	7560000-20000000,12000000	
<i>Passer italiae</i>	Italian Sparrow	B	VU	A2bce+3bce+4bce	Decreasing	4240000-6900000,5360000	Yes
<i>Passer moabiticus</i>	Dead Sea Sparrow	B	LC		Unknown	2000-6000,3500	

Scientific species name	Common species name	Season of assessment	IUCN Red List category (Europe)	IUCN Red List criteria (Europe)	Population trend	Population size [mature individuals] min-max, best estimate	(Near*) endemic to Europe?
<i>Passer montanus</i>	Eurasian Tree Sparrow	B	LC		Decreasing	53700000-76000000,63300000	
<i>Petronia petronia</i>	Rock Sparrow	B	LC		Increasing	4320000-9340000,6270000	
<i>Acanthis flammea</i>	Redpoll	B	LC		Increasing	9010000-19100000,13200000	
<i>Bucanetes githagineus</i>	Trumpeter Finch	B	LC		Unknown	21300-44000,30500	
<i>Bucanetes mongolicus</i>	Mongolian Finch	B	LC		Unknown	1100-3200,1800	
<i>Carduelis carduelis</i>	European Goldfinch	B	LC		Increasing	56100000-88700000,68900000	
<i>Carduelis citrinella</i>	Citril Finch	B	LC		Fluctuating	502000-569000,530000	Yes
<i>Carduelis corsicana</i>	Corsican Finch	B	LC		Unknown	26000-51000,36400	Yes
<i>Carpodacus erythrinus</i>	Common Rosefinch	B	LC		Decreasing	6830000-14000000,9730000	
<i>Carpodacus rubicilla</i>	Great Rosefinch	B	LC		Unknown	5800-23600,10500	
<i>Chloris chloris</i>	European Greenfinch	B	LC		Decreasing	41500000-64400000,50800000	Yes
<i>Coccothraustes coccothraustes</i>	Hawfinch	B	LC		Increasing	7280000-12100000,9290000	
<i>Fringilla coelebs</i>	Common Chaffinch	B	LC		Stable	30800000-46200000,37100000	
<i>Fringilla montifringilla</i>	Brambling	B	LC		Decreasing	14000000-26000000,19500000	
<i>Fringilla polatzeki</i>	Gran Canaria Blue Chaffinch	B	EN	D	Increasing	430-430,430	Yes
<i>Fringilla teydea</i>	Tenerife Blue Chaffinch	B	NT	D2	Increasing	2000-5000,3200	Yes
<i>Linaria cannabina</i>	Common Linnet	B	LC		Increasing	35800000-64400000,46100000	
<i>Linaria flavirostris</i>	Twite	B	LC		Unknown	159000-548000,285000	
<i>Pinicola enucleator</i>	Pine Grosbeak	B	LC		Stable	254000-448000,341000	
<i>Pyrrhula murina</i>	Azores Bullfinch	B	VU	D1+2	Stable	510-1700,970	Yes
<i>Pyrrhula pyrrhula</i>	Eurasian Bullfinch	B	LC		Increasing	9790000-17300000,12900000	
<i>Rhodopechys sanguineus</i>	Eurasian Crimson-winged Finch	B	LC		Unknown	107000-411000,209000	
<i>Rhodospiza obsoleta</i>	Desert Finch	B	LC		Fluctuating	6100-12400,8700	
<i>Serinus canaria</i>	Island Canary	B	LC		Stable	2380000-4970000,3820000	Yes
<i>Serinus pusillus</i>	Red-fronted Serin	B	LC		Unknown	594000-1920000,1050000	
<i>Serinus serinus</i>	European Serin	B	LC		Decreasing	35200000-55900000,43000000	Yes
<i>Spinus spinus</i>	Eurasian Siskin	B	LC		Stable	13700000-25800000,19000000	
<i>Loxia curvirostra</i>	Red Crossbill	B	LC		Stable	5610000-14200000,9020000	
<i>Loxia leucoptera</i>	Two-barred Crossbill	B	LC		Stable	204000-613000,354000	
<i>Loxia pytyopsittacus</i>	Parrot Crossbill	B	LC		Fluctuating	416000-957000,648000	Yes
<i>Loxia scotica</i>	Scottish Crossbill	B	LC		Unknown	8100-22700,13600	Yes
<i>Calcarius lapponicus</i>	Lapland Longspur	B	LC		Unknown	3120000-5170000,4000000	
<i>Emberiza aureola</i>	Yellow-breasted Bunting	B	CR	A2bcd+3bcd+4bcd	Decreasing	1200-2500,1700	
<i>Emberiza bruniceps</i>	Red-headed Bunting	B	LC		Increasing	8400-25000,14500	
<i>Emberiza buchanani</i>	Grey-necked Bunting	B	LC		Unknown	13800-40300,23400	
<i>Emberiza caesia</i>	Cretzschmar's Bunting	B	LC		Unknown	230000-451000,320000	Yes
<i>Emberiza calandra</i>	Corn Bunting	B	LC		Decreasing	42200000-67800000,52100000	
<i>Emberiza cia</i>	Rock Bunting	B	LC		Decreasing	3880000-8580000,5640000	
<i>Emberiza cineracea</i>	Cinereous Bunting	B	NT	C1	Decreasing	5300-10400,7400	Yes
<i>Emberiza cirrus</i>	Cirl Bunting	B	LC		Decreasing	4910000-9150000,6570000	Yes
<i>Emberiza citrinella</i>	Yellowhammer	B	LC		Decreasing	39000000-54000000,45500000	
<i>Emberiza hortulana</i>	Ortolan Bunting	B	LC		Decreasing	7220000-11300000,8940000	
<i>Emberiza leucocephalos</i>	Pine Bunting	B	RE		N/A	0-0,0	
<i>Emberiza melanocephala</i>	Black-headed Bunting	B	LC		Unknown	4940000-17900000,9080000	
<i>Emberiza pallasii</i>	Pallas's Bunting	B	LC		Unknown	20000-34000,26100	
<i>Emberiza pusilla</i>	Little Bunting	B	LC		Unknown	5020000-7070000,5960000	
<i>Emberiza rustica</i>	Rustic Bunting	B	LC		Decreasing	834000-1640000,1220000	
<i>Emberiza schoeniclus</i>	Reed Bunting	B	LC		Decreasing	9500000-16700000,12300000	
<i>Plectrophenax nivalis</i>	Snow Bunting	B	LC		Unknown	2510000-4940000,3480000	

Appendix 2. Countries and territories covered by the European Red List of Birds

COUNTRIES AND TERRITORIES	
Albania	Italy
Andorra	Kosovo
Armenia	Latvia
Austria	Liechtenstein
Azerbaijan	Lithuania
The Azores	Luxembourg
Belarus	Northern Macedonia
Belgium	Madeira
Bosnia and Herzegovina	Malta
Bulgaria	Moldova
The Canary Islands	Montenegro
Croatia	The Netherlands
Cyprus	Norway
Czechia	Poland
Denmark	Portugal
Estonia	Romania
The Faroe Islands	European Russia
Finland	Serbia
France	Slovakia
Georgia	Slovenia
Germany	Spain
Gibraltar	Svalbard and Jan Mayen
Greece	Sweden
Greenland	Switzerland
Hungary	Turkey
Iceland	Ukraine
Ireland	The United Kingdom



Arctic Skua (*Stercorarius parasiticus*)
Photo: Tony Morris



Azure Tit (*Cynaistes cyanus*)
Photo: Istock



Sooty Tern (*Onychoprion fuscatus*)
Photo: Istock

Photo credits:

Cover: Demoiselle Crane (*Anthropoides virgo*) - Photo: Istock

Page 9: Kingfisher (*Alcedo atthis*) – Photo: Jan Veber; Steppe Eagle (*Aquila nipalensis*) – Photo: 4028mdk09; Black-necked Grebe (*Podiceps nigricollis*) – Photo: Martin Mecnarowski; Yellow-breasted Bunting (*Emberiza aureola*) – Photo: Hiyashi Haka; Atlantic Puffin (*Fratercula arctica*) – Photo: Sue Cro; Woodchat Shrike (*Lanius senator*) - Photo: Juan Emilio; Demoiselle Crane (*Anthropoides virgo*) - Photo: Istock; Northern Pintail (*Anas acuta*) – Photo: Ivan Dudáček; Greater Spotted Eagle (*Clanga clanga*) – Photo: Koshy Koshy; Rook (*Corvus frugilegus*) – Photo: Jiřina Chalupská; Atlantic Puffin (*Fratercula arctica*) – Photo: Martha de Jong-Lantink; Common Eider (*Somateria mollissima*) – Photo: Ondřej Prosický; Common Redshank (*Tringa totanus*) – Photo: Britt-Marie Sohlström; Red-necked Grebe (*Podiceps grisegena*) – Photo: Becky Matsubara; Balearic Shearwater (*Puffinus mauretanicus*) – Photo: Cabrera Natura; Sooty Tern (*Onychoprion fuscatus*) - Photo: Istock; Greater Spotted Eagle (*Clanga clanga*) – Photo: Peter Steward; Common Quail (*Coturnix coturnix*) – Photo: Petr Šaj; Atlantic Puffin (*Fratercula arctica*) – Photo: Sue Cro; Gran Canaria Blue Chaffinch (*Fringilla polatzeki*) – Photo: Miguel Angel Peña Estévez; Arctic Skua (*Stercorarius parasiticus*) – Photo: Tony Morris; Red-knobbed Coot (*Fulica cristata*) – Photo: Muchaxo; Eurasian Curlew (*Numenius arquata*) – Photo: Petr Šaj; Azure Tit (*Cynaistes cyanus*) - Photo: Istock; Red-necked Grebe (*Podiceps grisegena*) – Photo: Becky Matsubara; Common Snipe (*Gallinago gallinago*) – Photo: Martin Mecnarowski; Gran Canaria Blue Chaffinch (*Fringilla polatzeki*) – Photo: Miguel Angel Peña Estévez; Red-necked Grebe (*Podiceps grisegena*) – Photo: Kim Taylor; Greater Spotted Eagle (*Clanga clanga*) – Photo: Swati Kulkarni; Black-tailed Godwit (*Limosa limosa*) – Photo: Petr Šaj; Red-necked Grebe (*Podiceps grisegena*) – Photo: Mah Connor; Demoiselle Crane (*Anthropoides virgo*) – Photo: Tim Strater; Redshank (*Tringa totanus*) – Photo: Frans Vandewalle; Sociable Lapwing (*Vanellus gregarius*) – Photo: Rob Llewellyn; Sociable Lapwing (*Vanellus gregarius*) – Photo: Adrian Drummond-Hill; Common Redshank (*Tringa totanus*) – Photo: Britt-Marie Sohlström

Page 21: Kingfisher (*Alcedo atthis*) – Photo: Jan Veber; Greater Spotted Eagle (*Clanga clanga*) – Photo: Koshy Koshy; Black-tailed Godwit (*Limosa limosa*) - Photo: Petr Šaj

Page 22: Eurasian Curlew (*Numenius arquata*) – Photo: Petr Šaj; Common Snipe (*Gallinago gallinago*) – Photo: Martin Mecnarowski; Common Redshank (*Tringa totanus*) – Photo: Britt-Marie Sohlström; Northern Pintail (*Anas acuta*) – Photo: Ivan Dudáček;

Page 23: Common Eider (*Somateria mollissima*) - Photo: Ondřej Prosický; Common Quail (*Coturnix coturnix*) – Photo: Petr Šaj; Red-necked Grebe (*Podiceps grisegena*) – Photo: Becky Matsubara; Black-necked Grebe (*Podiceps nigricollis*) – Photo: Martin Mecnarowski



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