

## ***Motacilla alba* (White Wagtail)**

### **European Red List of Birds**

### **Supplementary Material**

The European Union (EU28) Red List assessments were based principally on the official data reported by EU Member States to the European Commission under Article 12 of the Birds Directive in 2019-20. For the European Red List assessments, similar data were sourced from BirdLife Partners and other collaborating experts in other European countries and territories. For more information, see BirdLife International (2021).

#### **Contents**

Reported national population sizes and trends  
Trend maps of reported national population data  
Sources of reported national population data  
Species factsheet bibliography

#### **Recommended citation**

BirdLife International (2021) European Red List of Birds. Luxembourg: Publications Office of the European Union.

#### **Further information**

<http://datazone.birdlife.org/info/euroredlist>  
<http://www.birdlife.org/europe-and-central-asia/european-red-list-birds-0>  
<http://www.iucnredlist.org/regions/europe>  
<http://ec.europa.eu/environment/nature/conservation/species/redlist/>

#### **Data requests and feedback**

To request access to these data in electronic format, provide new information, correct any errors or provide feedback, please email [science@birdlife.org](mailto:science@birdlife.org).

*Motacilla alba* (White Wagtail)

**Table 1.** Reported national breeding population size and trends in Europe<sup>1</sup>.

Country (or territory) <sup>2</sup>	Population estimate				Short-term population trend <sup>5</sup>				Long-term population trend <sup>5</sup>				Subspecific population (where relevant)
	Size (pairs) <sup>3</sup>	Europe (%)	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	
Albania	2000–4100	<1	2007-2018	partial	-	-41 to 1	2007-2018	partial	0	-18 to 1	1980-2018	expert	M. a. alba
Andorra	160–490	<1	2014-2017	partial	+		2011-2018	complete	?				
Armenia	24900–35700	<1	2013-2018	complete	0		2007-2018		0		2003-2018	partial	
Austria	50000–70000	<1	2013-2018	partial	-		2007-2018	complete	?		1981-2018	deficient	
Azerbaijan	50000–500000	<1	1996-2019	expert	?		2013-2019	expert	?		1980-2019	expert	
Belarus	800000–1200000	5	2010-2018	partial	0	-10 to 10	2012-2019	expert	0	0	1980-2019	expert	
Belgium	49800–93700	<1	2013-2018	expert	0	-23 to 8	2008-2018	complete	+	99 to 275	1973-2018	partial	
Bosnia & HG	15000–30000	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	30000–70000	<1	2005-2018	partial	0	5 to 10	2001-2018	partial	0	5 to 10	1980-2018	expert	
Croatia	42200–139000	<1	2013-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Czechia	95000–190000	<1	2014-2017	complete	+		2007-2018	complete	+		1982-2018	complete	
Denmark	136000–137000	<1	2017	partial	0	-13 to 39	2006-2017	complete	+	50 to 95	1980-2017	complete	
DK: Faroe Is	2–10	<1	2014	expert	?				?				
DK: Greenland	10	<1	2018	expert	F		2007-2018	deficient	F		1989-2018	deficient	
Estonia	150000–200000	<1	2013-2017	expert	0	-14 to -13	2007-2018	expert	+	-32 to 90	1983-2018	expert	
Finland	327000–469000	2	2013-2018	complete	-	-36 to -19	2007-2018	complete	0	-11 to 28	1980-2018	complete	
France	400000–700000	3	2013-2018	partial	0		2007-2018	partial	0		1989-2017	partial	
Georgia	present	<1		deficient	?			deficient	?				
Germany	475000–680000	3	2016-2016	complete	0	-15 to 2	2004-2016	complete	-		1980-2016	expert	
Greece	5000–10000	<1	2015	partial	0		2007-2018	partial	0		1980-2018	partial	
Hungary	67000–71000	<1	2014-2018	complete	+	7 to 74	2007-2018	complete	0		1980-2018	partial	
Iceland	20000–50000	<1	1998	expert	?		2006-2018	deficient	?		1980-2018	deficient	
Rep. Ireland	248000–643000	2	2011-2016	complete	+	16 to 31	2006-2016	complete	?		1980-2016	deficient	
Italy	150000–300000	1	2013-2018	expert	0		2012-2017	partial	+		1993-2018	expert	
Kosovo	4500–5500	<1	2007-2019	partial	+		2007-2018	partial	+		1990-2018	partial	
Latvia	127000–199000	<1	2016-2016	complete	0	-28 to 14	2005-2018	complete	0	-46 to 29	1995-2018	complete	
Lithuania	350000–450000	2	2013-2018	partial	-		2013-2018	partial	0	0	1980-2018	partial	
Luxembourg	5000–8000	<1	2013-2018	partial	0		2007-2018	partial	?		1980-2018	expert	
North Macedonia	5000–10000	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Moldova	30000–40000	<1	2014-2017	partial	0		2007-2018	partial	0		1990-2018	expert	
Montenegro	3000–7000	<1	2002-2012	expert	0		2007-2018	expert	?				
Netherlands	70000–110000	<1	2013-2015	complete	+	4 to 19	2006-2017	complete	-	-51 to -31	1984-2017	complete	

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Country (or territory) <sup>2</sup>	Population estimate				Short-term population trend <sup>5</sup>				Long-term population trend <sup>5</sup>				Subspecific population (where relevant)
	Size (pairs) <sup>3</sup>	Europe (%)	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	
Norway	400000–600000	2	2013-2018	expert	0		2013-2018	partial	0		1980-2018	partial	
Poland	623000–813000	4	2013-2018	complete	-	-22 to -7	2007-2018	complete	?		1980-2018	deficient	
Portugal	100000–500000	1	2013-2018	partial	+		2007-2018	partial	+		1980-2018	partial	
Romania	553000–907000	4	2013-2015	complete	?	-6 to 1	2008-2018	complete	?		1980-2018	deficient	
Russia	6000000–11000000	42	2008-2018	partial	0		2008-2018	expert	?		1980-2018	deficient	
Serbia	50000–83000	<1	2013-2018	partial	+	10 to 29	2007-2018	complete	+	10 to 29	1980-2018	complete	
Slovakia	50000–100000	<1	2013-2018	partial	0		2007-2018	partial	0		1980-2018	partial	
Slovenia	113000–139000	<1	2018-2018	complete	-		2008-2018	complete	?		1980-2018	deficient	
Spain	1950000–2610000	12	2004-2018	partial	-		2007-2018	partial	-		1980-2018	partial	
Sweden	270000–311000	2	2013-2018	partial	-	-34 to -24	2007-2018	partial	-	-45 to -34	1980-2018	partial	
Switzerland	90000–110000	<1	2013–2016	partial	-	-24 to -7	2007-2018	complete	-	-19 to -4	1990-2018	complete	
Turkey	300000–600000	2	2002-2012	deficient	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	520000–790000	3	2015-2017	partial	0		2010-2019	partial	0		1980-2019	partial	
United Kingdom	443000–572000	3	2016	partial	0		2004-2016	complete	0		1980-2016	complete	
EU28	6880000–10500000	43											
<b>Europe</b>	<b>15100000–25600000</b>	<b>100</b>											

<sup>1</sup> See 'Sources' at end of factsheet, and for more details on individual EU Member State reports, see the Article 12 reporting portal at <http://bd.eionet.europa.eu/article12/report>.

<sup>2</sup> The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

<sup>3</sup> In the few cases where population size estimates were reported in units other than those specified, they were converted to the correct units using standard correction factors.

<sup>4</sup> The 'method used' (replacing the data 'quality' assessment in the 2015 European Red List) is reported as: a) Complete: complete survey or a statistically robust estimate; b) Partial: based mainly on extrapolation from a limited amount of data; c) Expert: based mainly on expert opinion with very limited data; d) Defficient: insufficient or no data available.

<sup>5</sup> The robustness of regional trends to the effects of any missing or incomplete data was tested using plausible scenarios, based on other sources of information, including any other reported information, recent national Red Lists, scientific literature, other publications and consultation with relevant experts.

<sup>6</sup> Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).

<sup>7</sup> Trend magnitudes are rounded to the nearest integer.

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**Table 2.** Reported national wintering population sizes and trends in Europe<sup>1</sup>. Note that some countries within the species' wintering range did not report any data, and that only minimum totals are presented, to avoid double-counting of birds moving between countries.

Country (or territory) <sup>2</sup>	Population estimate				Short-term population trend <sup>5</sup>				Long-term population trend <sup>5</sup>				Subspecific population (where relevant)
	Size (individuals) <sup>3</sup>	Europe (%)	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	
Bosnia & HG	1000–5000	78	2015-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Gibraltar	50–100	4	2006-2018	partial	+	10 to 100	2000-2018	partial	+	10 to 100	1980-2018	partial	
Serbia	100–3000	19	2013-2018	partial	F		2013-2018	partial	?	-10 to 10	1980-2018	expert	
EU28	50–100	3											
<b>Europe</b>	<b>1100–8100</b>	<b>100</b>											

<sup>1</sup> See 'Sources' at end of factsheet, and for more details on individual EU Member State reports, see the Article 12 reporting portal at <http://bd.eionet.europa.eu/article12/report>.

<sup>2</sup> The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

<sup>3</sup> In the few cases where population size estimates were reported in units other than those specified, they were converted to the correct units using standard correction factors.

<sup>4</sup> The 'method used' (replacing the data 'quality' assessment in the 2015 European Red List) is reported as: a) Complete: complete survey or a statistically robust estimate; b) Partial: based mainly on extrapolation from a limited amount of data; c) Expert: based mainly on expert opinion with very limited data; d) Defficient: insufficient or no data available.

<sup>5</sup> The robustness of regional trends to the effects of any missing or incomplete data was tested using plausible scenarios, based on other sources of information, including any other reported information, recent national Red Lists, scientific literature, other publications and consultation with relevant experts.

<sup>6</sup> Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).

<sup>7</sup> Trend magnitudes are rounded to the nearest integer.

## Trend maps

A symbol appears in each country where the species occurs: the shape and colour of the symbol represent the population trend in that country, and the size of the symbol corresponds to the proportion of the European population occurring in that country.

### KEY

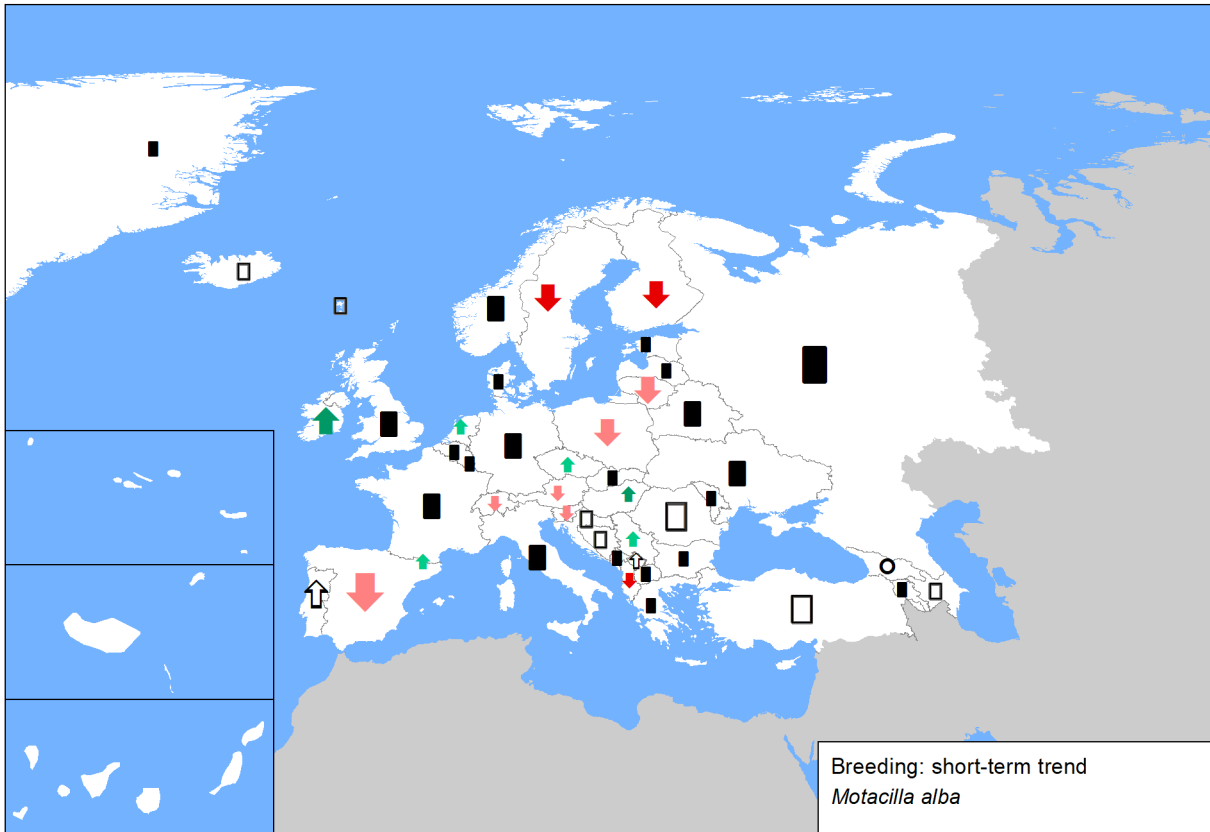
- |   |                                 |
|---|---------------------------------|
| ↑ Large increase (≥50%)                 | ↓ Large decrease (≥50%)         |
| ↑ Moderate increase (20–49%)            | ↓ Moderate decrease (20–49%)    |
| ↑ Small increase (<20%)                 | ↓ Small decrease (<20%)         |
| ↑ Increase of unknown magnitude         | ↓ Decrease of unknown magnitude |
| ■ Stable or fluctuating                 |                                 |
| □ Unknown                               |                                 |
| ○ Present (no population or trend data) |                                 |
| × Extinct since 1980                    |                                 |

Each symbol, with the exception of Present and Extinct, may occur in up to three different size classes, corresponding to the proportion of the European population occurring in that country.

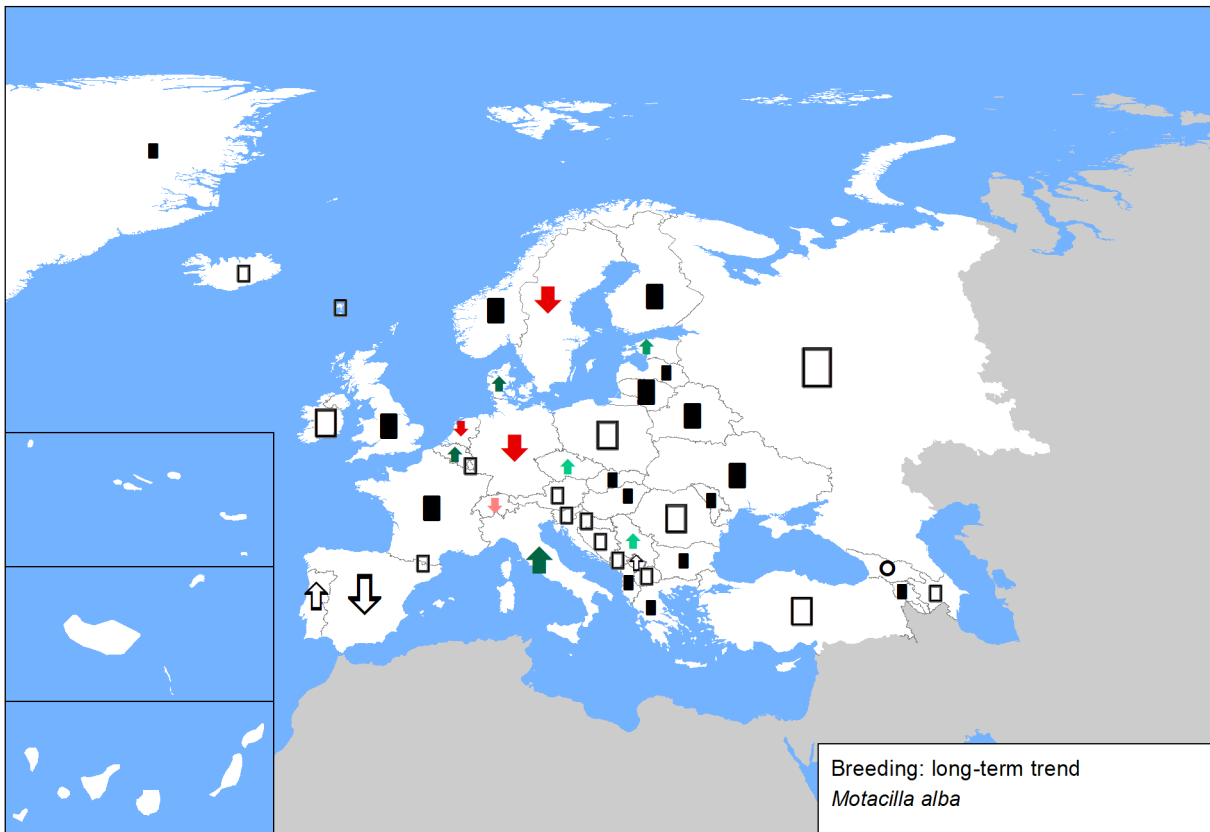
- ↑ Large: ≥10% of the European population
- ↑ Medium: 1–9% of the European population
- ↑ Small: <1% of the European population

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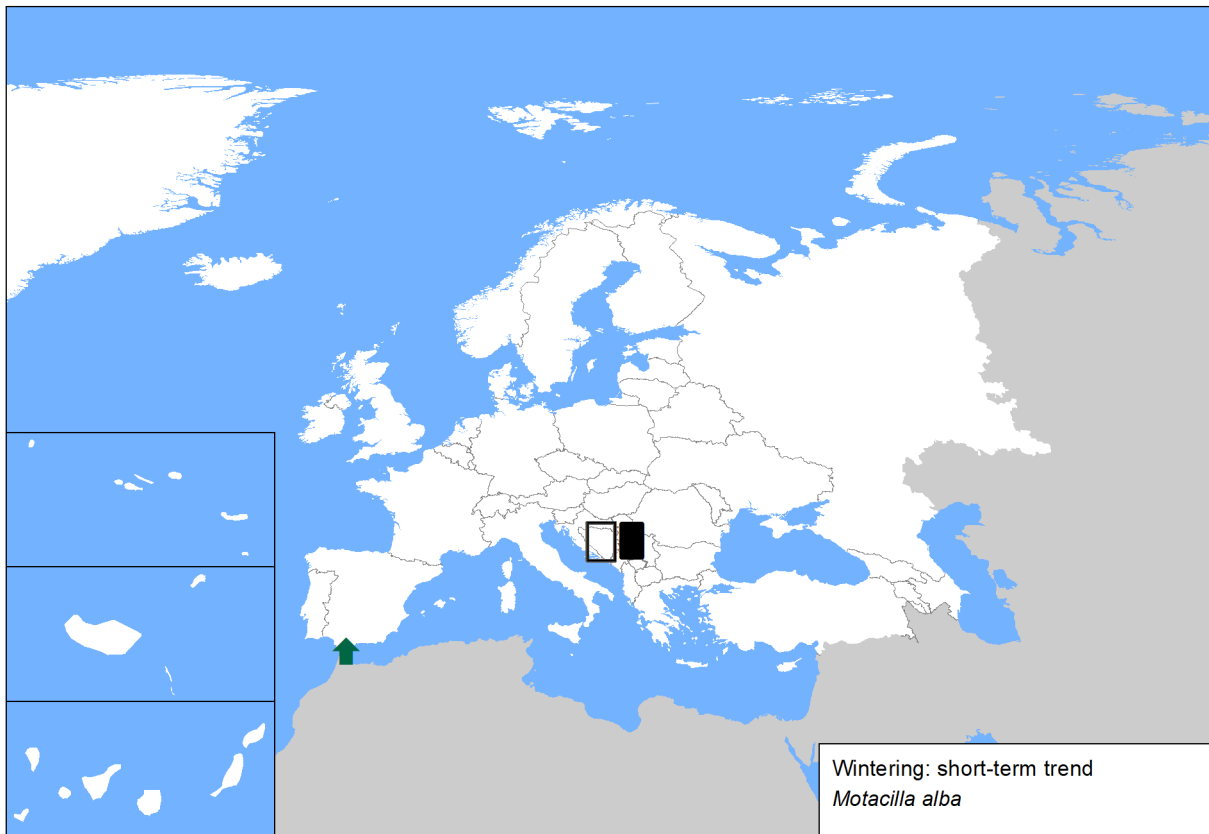
**Figure 1.** Breeding population sizes and short-term trends across Europe.



**Figure 2.** Breeding population sizes and long-term trends across Europe.



**Figure 3.** Reported wintering population sizes and short-term trends across Europe. Note that some countries within the species' wintering range did not report any data.



**Figure 4.** Reported wintering population sizes and long-term trends across Europe. Note that some countries within the species' wintering range did not report any data.



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### Sources

#### Albania: *M. a. alba*

<b>Breeding population size:</b> Bino & Xeka pers. obs.
<b>Breeding short-term trend:</b> Bino & Xeka pers. obs.
<b>Breeding long-term trend:</b> Bino pers. obs.

#### Andorra

<b>Breeding population size:</b> Fieldwork EBBA2, published at "Guia dels ocells d'Andorra. J. Nicolau & C. Pladevall, 2018"
<b>Breeding short-term trend:</b> Common Bird Monitoring Scheme of Andorra (SOCA)

#### Armenia

<b>Breeding population size:</b> TSE NGO National Bird Monitoring data.
<b>Breeding short-term trend:</b> TSE (2020) The Atlas of the Breeding Birds in Armenia. In preparation.
<b>Breeding long-term trend:</b> TSE (2020) The Atlas of the Breeding Birds in Armenia. In preparation.

#### Austria

<b>Breeding population size:</b> BirdLife Austria, estimate based on a sample of breeding densities from different sites and habitats and corrected by the results of the Austrian breeding bird monitoring ("Brutvogelmonitoring") for 1998- 2018
<b>Breeding short-term trend:</b> BirdLife Austria, results of the Austrian Breeding bird monitoring ("Brutvogelmonitoring")
<b>Breeding long-term trend:</b> BirdLife Austria, unpublished

#### Azerbaijan

<b>Breeding population size:</b> BirdLife International 2004
<b>Breeding short-term trend:</b> AOS data base
<b>Breeding long-term trend:</b> AOS Data Base

#### Belarus

<b>Breeding population size:</b> Research work of the National Academy of Sciences of the Republic of Belarus "Dynamics and predictive assessment of changes in the state of populations of the main resource and biocenotically most important bird species in Belarus"
<b>Breeding long-term trend:</b> Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p.

#### Belgium

<b>Breeding population size:</b> Vermeersch G. et al. (2018, in press). Broedvogels in Vlaanderen in de periode 2013-2018. Rapporten van het Instituut voor Natuur- en Bosonderzoek (INBO), Brussel. / Paquet, J-Y., Anselin, A., Vermeersch, G., Derouaux, A., Devos, K. (2019, in prep.). Contribution of Belgium to EBCC European Breeding Bird Atlas 2. Internal Report.
<b>Breeding short-term trend:</b> Vermeersch G. et al. (2018, in press). Broedvogels in Vlaanderen in de periode 2013-2018. Rapporten van het Instituut voor Natuur- en Bosonderzoek (INBO), Brussel. / Paquet, J-Y., Anselin, A., Vermeersch, G., Derouaux, A., Devos, K. (2019, in prep.). Contribution of Belgium to EBCC European Breeding Bird Atlas 2. Internal Report.
<b>Breeding long-term trend:</b> Vermeersch G. et al. (2018, in press). Broedvogels in Vlaanderen in de periode 2013-2018. Rapporten van het Instituut voor Natuur- en Bosonderzoek (INBO), Brussel. / Paquet, J-Y., Anselin, A., Vermeersch, G., Derouaux, A., Devos, K. (2019, in prep.). Contribution of Belgium to EBCC European Breeding Bird Atlas 2. Internal Report.

#### Bosnia and Herzegovina

<b>Breeding population size:</b> Based on data for EBBA2
<b>Breeding short-term trend:</b> more individual articles e.g published in magazine Bilten mreže posmatrača ptica u Bosni i Hercegovini-see <a href="https://ptice.ba/bs/category/bilteni_/">https://ptice.ba/bs/category/bilteni_/</a> , individual reports (e.g. for EBBA2, projects etc)
<b>Winter population size:</b> based on IWC reports-all reports published in magazine Bilten mreže posmatrača ptica ( <a href="http://www.ptice.ba">www.ptice.ba</a> )
<b>Winter short-term trend:</b> based on IWC reports-all reports published in magazine Bilten mreže posmatrača ptica ( <a href="http://www.ptice.ba">www.ptice.ba</a> )
<b>Winter long-term trend:</b> There are no qualitative data before 2005 to make estimates

#### Bulgaria

<b>Breeding population size:</b> Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p.; National Art. 12 reporting database 2013-2018; BSPB Bird Database
<b>Breeding short-term trend:</b> Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p.; National Art. 12 reporting database 2013-2018;
<b>Breeding long-term trend:</b> Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p.

#### Croatia

<b>Breeding population size:</b> Mikulić, K., Katanović, I., Zec, M., Budinski, I., (2018.): Izvještaj o stanju očuvanosti određenih vrsta ptica na području Republike Hrvatske. Udruga BIOM. Zagreb. 34 str.
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### Croatia

**Breeding short-term trend:** Mikulić, K., Katanović, I., Zec, M., Budinski, I., (2018.): Izvještaj o stanju očuvanosti određenih vrsta ptica na području Republike Hrvatske. Udruga BIOM. Zagreb. 34 str.

**Breeding long-term trend:** Mikulić, K., Katanović, I., Zec, M., Budinski, I., (2018.): Izvještaj o stanju očuvanosti određenih vrsta ptica na području Republike Hrvatske. Udruga BIOM. Zagreb. 34 str.

### Czechia

**Breeding population size:** Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017

**Breeding short-term trend:** ČSO (unpubl.): Common Bird Monitoring Programme

**Breeding long-term trend:** ČSO (unpubl.): Common Bird Monitoring Programme

### Denmark

**Breeding population size:** Charlotte M. Moshøj, Daniel Palm Eskildsen, Michael Fink Jørgensen & Thomas Vikstrøm, (2018): Overvågning af de almindelige fuglearter i Danmark 1975-2017 & Mandrup, E. 1997, Hvor mange fugle yngler i Danmark, Dansk Ornitologisk Tidsskrift, nr 3, 1997

**Breeding short-term trend:** Charlotte M. Moshøj, Daniel Palm Eskildsen, Michael Fink Jørgensen & Thomas Vikstrøm, (2018): Overvågning af de almindelige fuglearter i Danmark 1975-2017

**Breeding long-term trend:** Charlotte M. Moshøj, Daniel Palm Eskildsen, Michael Fink Jørgensen & Thomas Vikstrøm, (2018): Overvågning af de almindelige fuglearter i Danmark 1975-2017

### DK: Faroe Is

**Breeding population size:** Hammer et al. (2014) Færøsk trækfugleatlas [Faroese bird migration atlas]. Fróðskapur / Faroe University Press, Tórshavn.

### DK: Greenland

### Estonia

**Breeding population size:** Estonian Working Group on Bird Status and Numbers

**Breeding short-term trend:** [1] Estonian Working Group on Bird Status and Numbers [2] Point counts of breeding birds. [http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=3417&Itemid=5815](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3417&Itemid=5815)

**Breeding long-term trend:** [1] Estonian Working Group on Bird Status and Numbers [2] Point counts of breeding birds. [http://seire.keskkonnainfo.ee/index.php?option=com\\_content&view=article&id=3417&Itemid=5815](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3417&Itemid=5815)

### Finland

**Breeding population size:** Lehikoinen, A., Below, A., Jukarainen, A., Laaksonen, T., Lehtiniemi, T., Mikkola-Roos, M., Pessa, J., Rajasärkkä, A., Rusanen, P., Sirkiä, P., Tiainen, J. & Valkama, J. 2019: Suomen lintujen pesimäkantojen koot. – Linnut-vuosikirja 2018: 38-45.

**Breeding short-term trend:** Bird monitoring schemes of the Finnish Museum of Natural History, University of Helsinki.

**Breeding long-term trend:** Bird monitoring schemes of the Finnish Museum of Natural History, University of Helsinki.

### France

**Breeding population size:** Issa N. & Muller Y. 2015. Atlas des oiseaux nicheurs de France métropolitaine. , LPO/SEOF/MNHN/Delachaux et Niestlé, Paris

**Breeding short-term trend:** . STOC EPS / MNHN.

### Georgia

**Breeding population size:** BirdLife International 2004

### Germany

**Breeding population size:** Monitoring häufiger Brutvögel ([http://www.dda-web.de/index.php?cat=monitoring&subcat=ha\\_neu&subsubcat=kontakt](http://www.dda-web.de/index.php?cat=monitoring&subcat=ha_neu&subsubcat=kontakt))

**Breeding short-term trend:** Monitoring häufiger Brutvögel ([http://www.dda-web.de/index.php?cat=monitoring&subcat=ha\\_neu&subsubcat=kontakt](http://www.dda-web.de/index.php?cat=monitoring&subcat=ha_neu&subsubcat=kontakt))

**Breeding long-term trend:** Gerlach et al. (in Vorb.): Vögel in Deutschland – 2019. Dachverband Deutscher Avifaunisten, Bundesamt für Naturschutz und Länderarbeitsgemeinschaft der Vogelschutzwarten, Münster.

### Gibraltar

**Winter population size:** Bensusan, K.J. & Perez, C.E. (2003). A Conservation Action Plan for MOD sites in Gibraltar: Gibraltar Ornithological & Natural History Society. GONHS. Cortes, J. E. (1978). Conservation – A Future? Semi - natural Nature Reserve, Gibraltar: A Management Plan. Gibraltar Ornithological and Natural History Society. GONHS. Cortes, J.E. (1996). Windmill Hill Flats: a good view of migration across the Straits of Gibraltar. Almoraima 15:163-184. Cortes, J.E., Finlayson J.C., Garcia, E.F.J., Mosquera, M.A.J., (1980). The Birds of Gibraltar. Gibraltar Books. Gibraltar. Environmental Action & Management Plan (2012). Government of Gibraltar. Gibraltar Bird Reports (2006 - 2012). Gibraltar Ornithological & Natural History Society Gibraltar Nature News (2006 – 2012). Bi-annual Publication. Gibraltar Ornithological & Natural History Society. Nature Protection Act 1991 (2013). Perez, C.E. (2013). Report on the Conservation of Terrestrial Flora & Fauna in Gibraltar (2012). Wildlife (Gibraltar) Ltd Perez, C.E. & Bensusan, K. J. (2005). Upper Rock Nature Reserve A Management and Action. Plan. Gibraltar: The Gibraltar Ornithological & Natural History Society (GONHS). Perez, C.E. (2006). Biodiversity Action Plan, Gibraltar: Planning for Nature. Gibraltar: Gibraltar Ornithological & Natural History Society (GONHS). Southern Waters of Gibraltar Management Scheme EU Natura 2000 Site (2012).

**Winter short-term trend:** Bensusan, K.J. & Perez, C.E. (2003). A Conservation Action Plan for MOD sites in Gibraltar: Gibraltar Ornithological & Natural History Society. GONHS. Cortes, J. E. (1978). Conservation – A Future? Semi - natural Nature Reserve, Gibraltar: A Management Plan. Gibraltar Ornithological and Natural History Society. GONHS. Cortes, J.E. (1996). Windmill Hill Flats: a good view of migration across the Straits of Gibraltar. Almoraima 15:163-184. Cortes, J.E., Finlayson J.C., Garcia, E.F.J., Mosquera, M.A.J., (1980). The Birds of Gibraltar. Gibraltar Books. Gibraltar. Environmental Action & Management Plan (2012). Government of Gibraltar. Gibraltar Bird Reports (2006 - 2012). Gibraltar Ornithological & Natural History Society Gibraltar Nature News (2006 – 2012). Bi-annual Publication. Gibraltar Ornithological & Natural History Society. Nature Protection Act 1991 (2013). Perez, C.E. (2013). Report on the Conservation of Terrestrial Flora & Fauna in Gibraltar (2012). Wildlife (Gibraltar) Ltd Perez, C.E. & Bensusan, K. J. (2005). Upper Rock Nature Reserve A Management and Action. Plan. Gibraltar: The Gibraltar Ornithological & Natural History Society (GONHS). Perez, C.E. (2006). Biodiversity Action Plan, Gibraltar: Planning for Nature. Gibraltar: Gibraltar Ornithological & Natural History Society (GONHS). Southern Waters of Gibraltar Management Scheme EU Natura 2000 Site (2012).

## *Motacilla alba* (White Wagtail)

### Gibraltar

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### Greece

**Breeding population size:** 1) BirdLife International (2004) Birds in Europe: Population estimates, trends and conservation status. Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12).

**Breeding short-term trend:** 1) BirdLife International (2004) Birds in Europe: Population estimates, trends and conservation status. Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12).

**Breeding long-term trend:** 1) Handrinos, G., & Akriotis, T., (1997) The birds of Greece. C. Helm, A & C Black, London. 2) BirdLife International (2004) Birds in Europe: Population estimates, trends and conservation status. Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12).

### Hungary

**Breeding population size:** National common bird monitoring scheme (MMM) database.

**Breeding short-term trend:** National common bird monitoring scheme (MMM) database. MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. 189-190 p.

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### Iceland

**Breeding population size:** Umhverfissráðuneytið 1992. Iceland: national report to UNCED. Reykjavík: Umhverfissráðuneytið.

### Republic of Ireland

**Breeding population size:** Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals (in prep). National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

**Breeding short-term trend:** Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals (in prep). National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

**Breeding long-term trend:** Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals (in prep). National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

### Italy

**Breeding population size:** Brichetti P & Fracasso G. 2007. Ornitologia italiana. Vol.4 (Apodidae-Prunellidae). Alberto Perdisa Editore, Bologna

**Breeding short-term trend:** Extrapolated data by the average annual trend, from: Rete Rurale Nazionale & Lipu (2018). Uccelli comuni delle zone agricole in Italia. Aggiornamento degli andamenti di popolazione e del FBI per la Rete Rurale Nazionale dal 2000 al 2017. 16 pp.

**Breeding long-term trend:** Brichetti P., Meschini E., 1993. Stima delle popolazioni di uccelli nidificanti. In Meschini E., Frugis S., 1993. Atlante degli uccelli nidificanti in Italia. Suppl. Ric. Biol. Selvaggina, 20, 1-345.

### Kosovo

**Breeding population size:** Qenan Maxhuni

**Breeding short-term trend:** Qenan Maxhuni

**Breeding long-term trend:** Puzovic, S. et al. (2004): Birds of Serbia and Montenegro – Size of nesting populations. I trends: 1990-2002. Ciconia 12

### Latvia

**Breeding population size:** Aunins A., Mardega I. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society

**Breeding short-term trend:** Aunins A., Mardega I. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society

**Breeding long-term trend:** Aunins A., Mardega I. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society

### Lithuania

**Breeding population size:** Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) 2015-2018. Lietuvos perinčių paukščių atlaso duomenų bazė (Lithuanian Breeding Birds Atlas Database). Vilnius. Ministry of Environment of the Republic of Lithuania. 2012. Status and trends of bird populations (Article 12, Birds Directive 2009/147/EC) National Summary 2008-2012 Lithuania.

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### Lithuania

**Breeding short-term trend:** Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) 2015-2018. Lietuvos perinčių paukščių atlaso duomenų bazė (Lithuanian Breeding Birds Atlas Database). Vilnius. Ministry of Environment of the Republic of Lithuania. 2012. Status and trends of bird populations (Article 12, Birds Directive 2009/147/EC) National Summary 2008-2012 Lithuania.

**Breeding long-term trend:** Logminas, V. (ed.). 1991. Lietuvos fauna: paukščiai. Vilnius: „Mokslas“. Kurlavičius, P. (ed.) 2006. Lietuvos perinčių paukščių atlasas. Kaunas: „Lututė“. Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) BirdLife International/European Bird Census Council. 2000. European bird populations: estimates and trends. Cambridge, UK: BirdLife International (BirdLife Conservation Series No. 10). Raudonikis L. 2004. Important Bird Areas of the European Union Importance in Lithuania. Lithuanian Ornithological Society & Institute of Ecology of Vilnius University. Lutute, Vilnius. Jusys, V., Karalius, S., Raudonikis, L. 2012. Lietuvos paukščių pažinimo vadovas. Kaunas: „Lututė“. Ministry of Environment of the Republic of Lithuania. 2012. Status and trends of bird populations (Article 12, Birds Directive 2009/147/EC) National Summary 2008-2012 Lithuania. Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) 2015-2018. Lietuvos perinčių paukščių atlaso duomenų bazė (Lithuanian Breeding Birds Atlas Database). Vilnius.

### Luxembourg

**Breeding population size:** Ornitho.lu (2018): online database natur&environment asbl & Dachverband Deutscher Avifaunisten (DDA) e.V.; Luxembourg Recorder (2018): database Musée national d'histoire naturelle; Luxembourg Lorgé P., E. Melchior (2016): Die Vögel Luxemburgs. Natur&environment Luxembourg. ISBN: 978-2-919920-01-3

**Breeding short-term trend:** Ornitho.lu (2018): online database natur&environment asbl & Dachverband Deutscher Avifaunisten (DDA) e.V.; Luxembourg Recorder (2018): database Musée national d'histoire naturelle; Luxembourg Lorgé P., E. Melchior (2016): Die Vögel Luxemburgs. Natur&environment Luxembourg. ISBN: 978-2-919920-01-3; LUXOR (2018): natur&environment – Bird-database, Luxembourg

**Breeding long-term trend:** Experts' estimate

### North Macedonia

**Breeding population size:** unpublished data from the European Breeding Bird Atlas 2

**Breeding short-term trend:** unpublished data from the European Breeding Bird Atlas 2

### Moldova

**Breeding population size:** Moldova's contribution for the second European Breeding Bird Atlas (EBBA2)

**Breeding short-term trend:** SPPN expert opinion (sppn.moldova@gmail.com)

**Breeding long-term trend:** SPPN expert opinion (sppn.moldova@gmail.com)

### Montenegro

**Breeding population size:** Puzovic, S., Simic, D., Saveljić, D., Gergelj, J., Tucakov, M., Stojnic, N., Hulo, I., Ham, I., Vizi, O., Sciban, M., Ruzic, M., Vucanovic, M., Jovanovic, T. (2004): Birds of Serbia and Montenegro – Size of nesting populations. I trends: 1990-2002. Ciconia 12,

### Netherlands

**Breeding population size:** Sovon Bird atlas (Sovon 2018)

**Breeding short-term trend:** NEM (Sovon, RWS, CBS, provinces)

**Breeding long-term trend:** NEM (Sovon, RWS, CBS, provinces)

### Norway

**Breeding population size:** Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2.

**Breeding short-term trend:** Terrestrial monitoring programme - extensive (TOV-e)

**Breeding long-term trend:** Shimmings, P. & Øien, I.J. 2015. Bestandsestimater for norske hekkefugler. NOF Rapport 2-2015. 268 pp.

### Poland

**Breeding population size:** State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MPPL – Common Bird Survey)

**Breeding short-term trend:** State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MPPL)

**Breeding long-term trend:** Chief Inspectorate of Environmental Protection & Polish Society for the Protection of Birds (OTOP) / BirdLife Poland

### Portugal

**Breeding population size:** eBird (2019). eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org/portugal/home>. (Accessed: October 22, 2018).

**Breeding short-term trend:** eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org/po>

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### Romania

**Breeding population size:** Romanian Common Bird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database

**Breeding short-term trend:** Romanian Common Bird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database

**Breeding long-term trend:** Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) Database

### Russia

**Breeding population size:** Voltzit & Kalyakin 2013-2019; Database of the project on Atlas of breeding birds of European Russia

**Breeding short-term trend:** Sarychev unpublished. vssar@yandex.ru; Belik unpublished. vpbelik@mail.ru

## *Motacilla alba* (White Wagtail)

### Serbia

**Breeding population size:** EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.

**Breeding short-term trend:** EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.

**Breeding long-term trend:** EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.

**Winter population size:** IWC database

**Winter short-term trend:** IWC database

**Winter long-term trend:** IWC database; Bioras database <http://www.bioras.petnica.rs/home.php>

### Slovakia

**Breeding population size:** Coordinatory group for reporting 2019. Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

**Breeding short-term trend:** Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002. SOS/BS 2013; [www.vtaky.sk](http://www.vtaky.sk)

**Breeding long-term trend:** Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. SOS/BS 2013; [www.vtaky.sk](http://www.vtaky.sk)

### Slovenia

**Breeding population size:** Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdičk 2002–2017. (The atlas of birds of Slovenia. The census of breeding birds 2002-2017.) – DOPPS, Ljubljana. Kmecl P. & Šumrada T. (2018): Monitoring splošno razširjenih vrst ptic za določitev slovenskega indeksa ptic kmetijske krajine - končno poročilo za leto 2018. (Monitoring of common bird species for the determination of Slovenian farmland bird index - final report for the year 2018.) – DOPPS, Ljubljana.

**Breeding short-term trend:** Kmecl P. & Šumrada T. (2018): Monitoring splošno razširjenih vrst ptic za določitev slovenskega indeksa ptic kmetijske krajine - končno poročilo za leto 2018. (Monitoring of common bird species for the determination of Slovenian farmland bird index - final report for the year 2018.) – DOPPS, Ljubljana.

**Breeding long-term trend:** There are no sources for this information.

### Spain

**Breeding population size:** Carrascal, L.M. & Palomino, D. (2008). Las aves comunes reproductoras en España. Población en 2004-2006. SEO/BirdLife. Madrid. 202 pp. ([https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/19\\_paseriformes\\_2004\\_2006\\_tcm30-208258.pdf](https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/19_paseriformes_2004_2006_tcm30-208258.pdf)) Información proporcionada por las comunidades autónomas.

**Breeding short-term trend:** Database of the 'Atlas de las aves reproductoras de España'. Updated version 2011 with data from SEO/BirdLife's monitoring programmes. In: Inventario Español de Especies Terrestres, Inventario Español del Patrimonio Natural y de la Biodiversidad. Ministerio de Agricultura, Alimentación y Medio Ambiente (2013). ([https://www.miteco.gob.es/fr/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet\\_aves\\_sist\\_seg\\_tendencia\\_comunes\\_esp.aspx](https://www.miteco.gob.es/fr/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet_aves_sist_seg_tendencia_comunes_esp.aspx)) Información proporcionada por las Comunidades Autónomas. SEO/BirdLife (2018). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2017. SEO/BirdLife. Madrid. 69 pp. (<https://www.seo.org/boletin/seguimiento/boletin/2017/html5forpc.html?page=0>) SEO/BirdLife (2019). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018. SEO/BirdLife. Madrid. (<https://doi.org/10.31170/0073>)

**Breeding long-term trend:** Martí, R. & del Moral, J.C. (Eds.) (2003). Atlas de las Aves Reproductoras de España. Dirección General de Conservación de la Naturaleza-Sociedad Española de Ornitología. Madrid, 733 pp. ([https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet\\_aves\\_atlas.aspx](https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx)) Purroy, F.J. (Coord.) (1997). Atlas de las aves de España (1975-1995). SEO/BirdLife. Lynx Edicions. Barcelona. 583 pp. SEO/BirdLife (2013). Programas de seguimiento de SEO/BirdLife en 2012. SEO/BirdLife. Madrid. 35 pp. SEO/BirdLife (2019). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018. SEO/BirdLife. Madrid. (<https://doi.org/10.31170/0073>)

### Sweden

**Breeding population size:** Ottosson, U., Ottvall, R., Elmberg, J., Green, M., Gustafsson, R., Haas, F., Holmqvist, N., Lindström, Å., Nilsson, L., Svensson, M., Svensson, S. & Tjernberg, M. 2012. Fåglarna i Sverige – antal och förekomst. SOF, Halmstad. Swedish Bird Survey. BirdLife Sverige, Annual Bird reports.

**Breeding short-term trend:** Svensk fågeltaxering - Swedish Bird Survey

**Breeding long-term trend:** Svensk fågeltaxering - Swedish Bird Survey

### Switzerland

**Breeding population size:** Knaus, P., S. Antoniazza, S. Wechsler, J. Guélat, M. Kéry, N. Strelbel & T. Sattler (2018): Swiss Breeding Bird Atlas 2013–2016. Distribution and population trends of birds in Switzerland and Liechtenstein. Swiss Ornithological Institute, Sempach.

**Breeding short-term trend:** <https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/>

**Breeding long-term trend:** <https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/>

### Turkey

**Breeding population size:** Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12) Kusbank Bird Database (Ebird) Kirwan G.M., Boyla K. A., Castell P., Demirci B., Özen M., Welch H., Marlow T., 2008, Birds of Turkey. Londra, Christopher Helm, 978-1-4081-0475-

### Ukraine

**Breeding population size:** Atlas work, non-published data

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**United Kingdom**

**Breeding population size:** Baseline = Newson, S.E., Evans, K.L., Noble, D.G., Greenwood, J.J.D. & Gaston, K.J. 2008. Use of distance sampling to improve estimates of national population sizes for common and widespread breeding birds in the UK. *Journal of Applied Ecology* 45: 1330-1338. Extrapolation from 2006 using Breeding Bird Survey monitoring trend.

**Breeding short-term trend:** BTO/JNCC/RSPB Breeding Bird Survey data: Harris, S.J., Massimino, D., Gillings, S., Eaton, M.A., Noble, D.G., Balmer, D.E., Procter, D., PearceHiggins, J.W. & Woodcock, P. 2018. The Breeding Bird Survey 2017. BTO Research Report 706 British Trust for Ornithology, Thetford. <https://www.bto.org/sites/default/files/bbs-report-2017.pdf>

**Breeding long-term trend:** Joint Common Bird Census/Breeding Bird Survey smoothed trend index. Woodward, I.D., Massimino, D., Hammond, M.J., Harris, S.J., Leech, D.I., Noble, D.G., Walker, R.H., Barimore, C., Dadam, D., Eglington, S.M., Marchant, J.H., Sullivan, M.J.P., Baillie, S.R. & Robinson, R.A. (2018) BirdTrends 2018: trends in numbers, breeding success and survival for UK breeding birds. Research Report 708. BTO, Thetford. [www.bto.org/birdtrends](http://www.bto.org/birdtrends)

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Kullberg, C., Fransson, T., Hedlund, J., Jonzén, N., Langvall, O., Nilsson, J. and Bolmgren, K. 2015. Change in spring arrival of migratory birds under an era of climate change, Swedish data from the last 140 years. *Ambio* 44(1): 69-77.

Sokolov, L.V. and Gordienko, N.S. 2008. Has recent climate warming affected the dates of bird arrival to the Il'men Reserve in the Southern Urals? *Russian Journal of Ecology* 39: 56-62.

Tryjanowski, P, Kuzniak, S. and Sparks, T.H. 2002. Earlier arrival of some farmland migrants in western Poland. *Ibis* 144: 62-68.

Tyler, S. 2016. White Wagtail (*Motacilla alba*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E. (eds), *Handbook of the Birds of the World Alive*, Lynx Edicions, Barcelona.

Tyler, S.J. 2004. Family Motacillidae (Pipits and wagtails). In: del Hoyo, J.; Elliott, A.; Christie, D. (ed.), *Handbook of birds of the world*, pp. 686-786. Lynx Edicions, Barcelona, Spain.

Vähätalo, A.V., Rainio, K., Lehikoinen, A. and Lehikoinen, E. 2004. Spring arrival of birds depends on the North Atlantic Oscillation. *Journal of Avian Biology* 35: 210-216.