Dryocopus martius (Black Woodpecker)

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

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.

Table 1. Reported national breeding population size and trends in Europe[1].

Country (or territory)[2]	Population estimate				Short-term population trend[5]				Long-term population trend[5]				Subspecific population (where relevant)
	Size (pairs)[3]	Europe (%)	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	
Albania	460–1200	<1	2007-2018	partial	+	15 to 48	2007-2018	partial	+	19 to 53	1980-2018	expert	
Andorra	32–48	<1	2014-2017	partial	?		2011-2018	complete	?				
Armenia	26–36	<1	2013-2018	complete	-	-30 to -20	2007-2018	complete	-	-40 to -20	2003-2018	partial	
Austria	12000–18000	2	2013-2018	partial	0		2007-2018	complete	?		1981-2018	deficient	
Azerbaijan	5000–10000	<1	1996-2019	expert	?		2013-2019	expert	?		1980-2019	expert	
Belarus	20000–30000	3	2010-2018	partial	0	-10 to 10	2012-2019	expert	0	0	1980-2019	expert	
Belgium	1400–2500	<1	2013-2018	partial	0	-30 to 24	2008-2019	partial	+	273 to 567	1973-2018	partial	
Bosnia & HG	1500–2500	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	4500–8000	<1	2013-2018	partial	+	20 to 30	2000-2018	expert	+	20 to 30	1980-2018	expert	
Croatia	1200–1800	<1	2010-2015	expert	?		2007-2018	deficient	?		1980-2018	deficient	
Czechia	5000–10000	<1	2014-2017	complete	+		2007-2018	complete	+		1982-2018	complete	
Denmark	220–230	<1	2017-2017	expert	0		2004-2017	expert	+		1980-2017	expert	
Estonia	5000–7000	<1	2013-2017	partial	0	-25 to 38	2007-2018	partial	+	149 to 865	1983-2018	partial	
Finland	23400–35400	4	2013-2018	complete	0	-19 to 14	2007-2018	complete	+	59 to 236	1980-2018	complete	
France	25000–40000	4	2013-2018	partial	0		2007-2018	partial	+		2001-2018	partial	
Georgia	460–4600	<1	2013-2017	partial	?			deficient	?				
Germany	32000–51000	5	2016-2016	expert	0		2004-2016	expert	0	-30 to 40	1980-2016	expert	
Greece	1000–2000	<1	2015	partial	0		2007-2018	partial	?		1980-2018	deficient	
Hungary	8800–10300	1	2014-2018	complete	?		2007-2018	complete	+		1980-2018	partial	
Italy	1300–3700	<1	2013-2018	expert	0		2000-2014	partial	0		1993-2018	expert	
Kosovo	200–300	<1	2007-2019	partial	-		2007-2018	partial	?		1990-2018	partial	
Latvia	6000–10000	<1	2018-2018	partial	0	-34 to 46	2008-2018	complete	-		1991-2018	partial	
Lithuania	4900–7000	<1	2013-2018	partial	-	-5 to 0	2013-2018	partial	0	0	1980-2018	partial	
Luxembourg	100–150	<1	2013-2018	partial	0	0	2007-2018	expert	+	0 to 10	1980-2018	expert	
North Macedonia	1500–5000	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Moldova	80–110	<1	2014-2017	partial	0		2007-2018	partial	0		1990-2018	expert	
Montenegro	300–600	<1	2002-2012	expert	0		2007-2018	expert	?				
Netherlands	700–1000	<1	2013-2015	complete	-	-27 to -6	2006-2017	complete	0	-38 to 6	1984-2017	complete	
Norway	2000–4000	<1	2013-2018	expert	0		2013-2018	partial	?		1980-2018	partial	
Poland	30000–45000	4	2013-2018	partial	0	-15 to 13	2007-2018	complete	?		1980-2018	deficient	
Romania	14500–57000	3	2013-2015	expert	?	-6 to 16	2008-2018	complete	?		1980-2018	deficient	
Russia	370000–700000	61	2006-2018	partial	?		2006-2019	partial	?		1980-2018	partial	

Dryocopus martius (Black Woodpecker)

Table 1. Reported national breeding population size and trends in Europe[1].

Country (or territory)[2]	Population estimate				Short-term population trend[5]				Long-term population trend[5]				Subspecific population (where relevant)
	Size (pairs)[3]	Europe (%)	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	
Serbia	3400–4800	<1	2013-2018	partial	+	30 to 49	2007-2018	complete	+	30 to 49	1980-2018	complete	
Slovakia	2000–2500	<1	2013-2018	partial	0		2007-2018	partial	0		1980-2018	partial	
Slovenia	4000–8000	<1	2002-2018	partial	?		2007-2018	deficient	?		1980-2018	deficient	
Spain	3100–5600	<1	2002-2018	complete	0		2007-2018	partial	+		1980-2018	partial	
Sweden	22000–27000	3	2013-2018	partial	-	-26 to -9	2007-2018	partial	-	-55 to -35	1980-2018	partial	
Switzerland	6000–9000	<1	2013–2016	partial	+	2 to 65	2007-2018	complete	+	123 to 231	1990-2018	complete	
Turkey	400–800	<1	2002-2012	deficient	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	3000–8000	<1	2015-2017	partial	F		2007-2009	deficient	F		1980-2018	deficient	
EU28	208000–354000	32											
Europe	**622000–1140000**	**100**											

[1] 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.
[2] 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.
[3] 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.
[4] 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.
[5] 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.
[6] Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).
[7] 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%)
- Moderate increase (20–49%)
- Small increase (<20%)
- Increase of unknown magnitude
- Large decrease (≥50%)
- Moderate decrease (20–49%)
- Small decrease (<20%)
- 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

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.

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

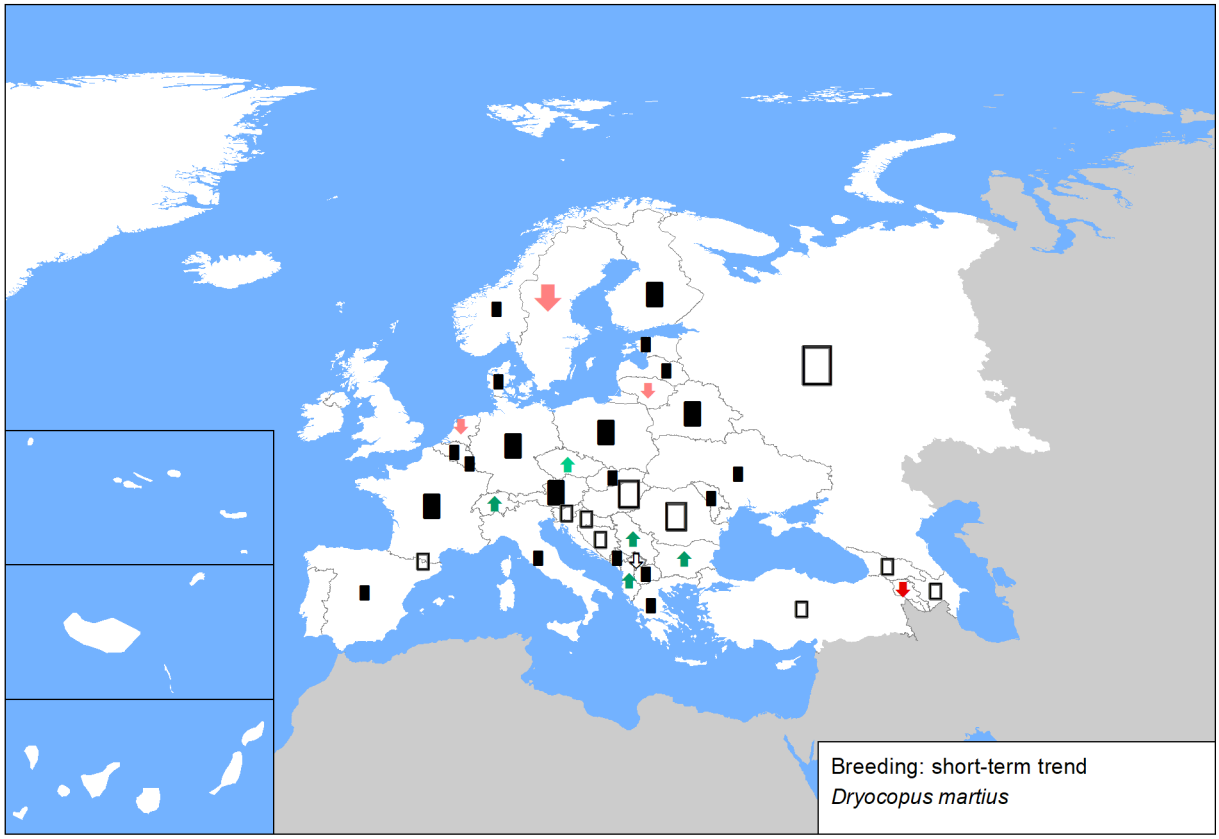
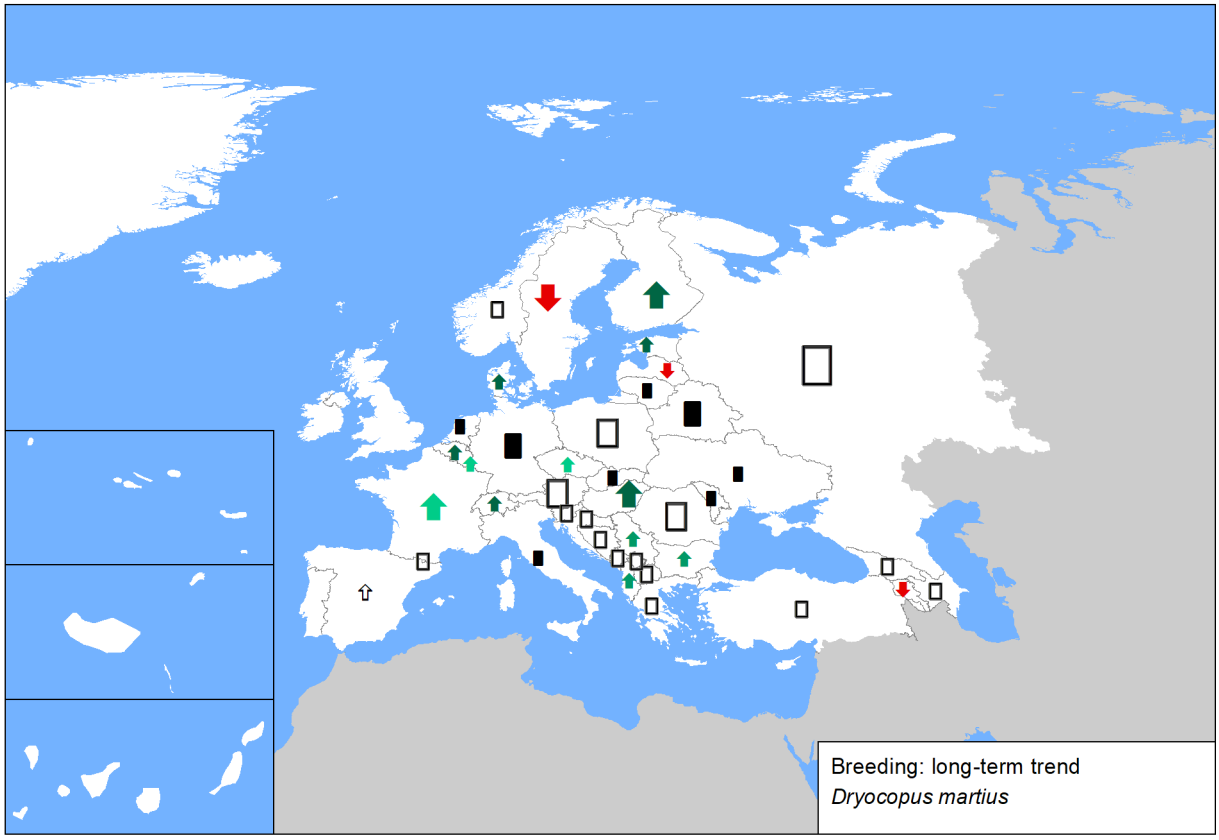


Figure 2. Breeding population sizes and long-term trends across Europe.



Sources

Albania

Breeding population size: Bino & Xeka pers. obs.
Breeding short-term trend: Bino & Xeka pers. obs.
Breeding long-term trend: Bino pers. obs.

Andorra

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

Armenia

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

Austria

Breeding population size: 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
Breeding short-term trend: BirdLife Austria, results of the Austrian Breeding bird monitoring ("Brutvogelmonitoring")
Breeding long-term trend: BirdLife Austria, unpublished

Azerbaijan

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

Belarus

Breeding population size: 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”
Breeding long-term trend: Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p.

Belgium

Breeding population size: 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.
Breeding short-term trend: 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.
Breeding long-term trend: 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

Breeding population size: Based on data for EBBA2
Breeding short-term trend: more individual articles e.g published in magazine Bilten mreže posmatrača ptica u Bosni i Hercegovini-see https://ptice.ba/bs/category/bilteni_/), individual reports (e.g. for EBBA2, projects etc)

Bulgaria

Breeding population size: 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. (In Bulgarian and English); National Art. 12 reporting database 2013-2018; Goelmansky (ed.)2011. Red Data Book of Bulgaria.vol.2 Animals.BAS,MOEW, Sofia P.Shurulinkov,G.Daskalova -own unpublished data BSPB Database
Breeding short-term trend: 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. (In Bulgarian and English); National Art. 12 reporting database 2013-2018; Goelmansky (ed.)2011. Red Data Book of Bulgaria.vol.2 Animals.BAS,MOEW, Sofia. BSPB Database P.Shurulinkov,G.Daskalova-own unpublished data
Breeding long-term trend: 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. (In Bulgarian and English) Nankinov D., S.Simeonov, T.Michev, B.Ivanov 1997. Fauna of Bulgaria.vol.26 Aves-part 2, BAS,Sofia Botev, B. (ed.) 1985. Red Data Book of Bulgaria, Vol. 2, Animals, Sofia, BAS, 183 p. Golemansky (ed.)2011. Red Data Book of Bulgaria.vol.2 Animals.BAS,MOEW, Sofia. BSPB Database

Croatia

Breeding population size: Zavod za ornitologiju (Sanja Barišić, Davor Ćiković, Jelena Kralj, Goran Sušić,Vesna Tutiš), Dragan Radović, Ivan Budinski, Robert Crnković, Antun Delić, Dubravko Dender, Vlatka Dumbović, Ivan Darko Grlica, Bariša Ilić, Luka Jurinović, Davor Krnjeta, Krešimir Leskovar, Duje Lisičić, Ivica Lolić, Gordan Lukač. Kristijan Mandić, Krešimir Mikulić, Tibor Mikuska, Gvido Piasevoli, Andrej Radalj, Zlatko Ružanović, Vlatka Šćetarić, Mirko Šetina, Adrian Tomik (2015): Procjene brojnosti za SPA područja. Državni zavod za zaštitu prirode, Zagreb

Dryocopus martius (Black Woodpecker)

Croatia

Breeding short-term trend: no data available
Breeding long-term trend: no data available

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: Pihl, S. & Fredshavn, J.R. 2015. Størrelse og udvikling af fuglebestande i Danmark. Artikel 12 rapportering til Fuglebeskyttelsesdirektivet. Aarhus Universitet, DCE - Nationalt Center for Miljø og Energi, 44 s. - Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi nr. 176.
Breeding short-term trend: Pihl, S. & Fredshavn, J.R. 2015. Størrelse og udvikling af fuglebestande i Danmark. Artikel 12 rapportering til Fuglebeskyttelsesdirektivet. Aarhus Universitet, DCE - Nationalt Center for Miljø og Energi, 44 s. - Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi nr. 176.
Breeding long-term trend: Pihl, S. & Fredshavn, J.R. 2015. Størrelse og udvikling af fuglebestande i Danmark. Artikel 12 rapportering til Fuglebeskyttelsesdirektivet. Aarhus Universitet, DCE - Nationalt Center for Miljø og Energi, 44 s. - Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi nr. 176.

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] Monitoring of woodpeckers. http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=2058&Itemid=371
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

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: MNHN / CRBPO / STOC 2018. pic noir tendance STOC. vigie-nature 05-12-18, http://vigienature.mnhn.fr/page/pic-noir.html; Issa N. & Muller Y. coord. 2015. Atlas des Oiseaux Nicheurs de France Metropolitaine. Nidification et présence hivernale.. LPO / SEOF / MNHN, Delachaux et Niestlé, Paris1408 p ; Faune-France 2018. statistiques pic noir Faune-France. Faune-France 05-12-18, https://www.faune-france.org/index.php?m_id=81&sp_tg=1&speciesFilter=pic+n&frmSpecies=336&frmDisplay=Afficher
Breeding short-term trend: MNHN / CRBPO / STOC 2018. pic noir tendance STOC. vigie-nature 05-12-18, http://vigienature.mnhn.fr/page/pic-noir.html; Faune-France 2018. statistiques pic noir Faune-France. Faune-France 05-12-18, https://www.faune-france.org/index.php?m_id=81&sp_tg=1&speciesFilter=pic+n&frmSpecies=336&frmDisplay=Afficher
Breeding long-term trend: MNHN / CRBPO / STOC 2018. pic noir tendance STOC. vigie-nature 05-12-18, http://vigienature.mnhn.fr/page/pic-noir.html

Georgia

Breeding population size: EBBA Georgia, prepared by Sabuko-Society for nature conservation, Ilia state university, NGO "psovi".

Germany

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

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). 2) Natura Viewer (http://natura2000.eea.europa.eu/#). 3) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.
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). 2) Natura Viewer (http://natura2000.eea.europa.eu/#). 3) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.
Breeding long-term trend: no data available

Hungary

Breeding population size: National common bird monitoring scheme (MMM) database. KEHOP-4.3.0-15-2016-00001 project.
Breeding short-term trend: National common bird monitoring scheme (MMM) database.

Dryocopus martius (Black Woodpecker)

Hungary

Breeding long-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. 278 p.

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 (2015). Uccelli comuni in Italia. Aggiornamento degli andamenti di popolazione e del FBI per la Rete Rurale Nazionale dal 2000 al 2014. LIPU, 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: Expert: Madars Bergmanis, bmadars@gmail.com

Breeding short-term trend: Aunins A. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society, 59 pp.

Breeding long-term trend: Strazds M., Priednieks J., Vāveriņš G. 1994. Size of Latvian bird populations. (in Latvian). In: Putni dabā, 4: 3–18.; Expert: Madars Bergmanis: bmadars@gmail.com

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.

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 Cencus 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&ëmwelt 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&ëmwelt Luxembourg. ISBN: 978-2-919920-01-3; Centrale ornithologique: Vogelmonitoring in Luxemburg im Rahmen der Berichterstattungspflicht an die Europäische Kommission 2018 (Zwischenbericht, unveröffentlicht)

Breeding short-term trend: Ornitho.lu (2018): online database natur&ëmwelt 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&ëmwelt Luxembourg. ISBN: 978-2-919920-01-3; LUXOR (2018): natur&ëmwelt – Bird-database, Luxembourg

Breeding long-term trend: Ornitho.lu (2018): online database natur&ëmwelt 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&ëmwelt Luxembourg. ISBN: 978-2-919920-01-3; LUXOR (2018): natur&ëmwelt – Bird-database, Luxembourg

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, provincies)

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

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); A. Sikora - unpublished information
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

Romania

Breeding population size: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) 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: Results of winter bird surveys in Russia and adjacent regions 2007-2018
Breeding long-term trend: Results of winter bird surveys in Russia and adjacent regions 2007-2018

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: 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: 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.

Slovakia

Breeding population size: Coordinatory group for reporting 2019. Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002. Ridzoň, J., Karaska, D., Topercer, J., 2015: Aktuálny stav výberových druhov vtákov v Chránených vtáčích územiach na Slovensku. Štátna ochrana prírody SR, Banská Bystrica, 320 s
Breeding short-term trend: Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002. CBC - common bird census EU birds mapping (SNC SR)
Breeding long-term trend: Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002. CBC - common bird census EU birds mapping (SNC SR)

Slovenia

Breeding population size: Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdilk 2002–2017. DOPPS, Ljubljana.
Breeding short-term trend: Short-term trend for Dryocopus martius is only known for Slovenian farmland which is not the primary habitat of the species. Short-term trend in farmland (period 2008-2018) is uncertain (see Kmecl P., Šumrada T. (2018): Monitoring splošno razširjenih vrst ptic za določitev slovenskega indeksa ptic kmetijske krajine - končno poročilo za leto 2018. DOPPS, Ljubljana.) There is no data on Dryocopus martius short-term trend in SPA forests in Slovenia.
Breeding long-term trend: No data is available for long-term trend of Dryocopus martius in Slovenia.

Spain

Breeding population size: Información proporcionada por las Comunidades Autónomas. 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)
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) Información proporcionada por las Comunidades Autónomas. 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)
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)

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.
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. Strebel & 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: Ferdi Akarsu, Güven Eken, Soner Bekir, Ferdi Akarsu, Güven Eken, Ferdi Akarsu personal communication (2019), 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

Bibliography

Bird, J. P., Martin, R., Akçakaya, H. R., Gilroy, J., Burfield, I. J., Garnett, S. G., Symes, A., Taylor, J., Sekercioglu, 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.

BirdLife International. 2004. Birds in Europe: population estimates, trends and conservation status. BirdLife International, Cambridge, U.K.

Brazil, M. 2009. Birds of East Asia: eastern China, Taiwan, Korea, Japan, eastern Russia. Christopher Helm, London.

Garmendia, A., Cárcamo, S., and Schwendtner, O. 2006. Forest management considerations for conservation of black woodpecker Dryocopus martius and white-backed woodpecker Dendrocopos leucotos populations in Quinto Real (Spanish Western Pyrenees). Forest Diversity and Management, pp. 339-355. Springer Netherlands.

Winkler, H. and Christie, D. 2002. Black Woodpecker (Dryocopus martius). In: J. del Hoyo, A. Elliott, J. Sargatal, D.A. Christie & E. de Juana (eds), Handbook of th e Birds of the World Alive, Lynx Edicions, Barcelona.

Zhelezov, G. 2010. Sustainable Development in Mountain Regions: Southeastern Europe. Springer, New York.