

***Aegolius funereus* (Boreal Owl)**

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.

Aegolius funereus (Boreal Owl)

Table 1. Reported national breeding population size and trends in Europe¹.

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	4–23	<1	2007-2018	partial	?		2007-2018	partial	?	-23 to 0	1980-2018	expert	
Andorra	10–25	<1	2014-2017	expert	?		2011-2018	deficient	?				
Armenia	8–12	<1	2013-2018	complete	?	10 to 30	2007-2018	expert	?		2003-2018	deficient	
Austria	2000–3000	2	2013-2018	partial	0		2007-2018	partial	?		1981-2018	deficient	
Belarus	2500–5000	2	2010-2018	partial	0	-10 to 10	2012-2019	expert	0	0	1980-2019	expert	
Belgium	3–40	<1	2013-2018	partial	F	-95 to 95	2008-2018	complete	+	-78 to 789	1973-2018	partial	
Bosnia & HG	1500–2500	1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	700–1200	<1	2013-2018	partial	?		2000-2018	partial	0	5 to 10	1980-2018	expert	
Croatia	400–700	<1	2012-2012	expert	?		2007-2018	deficient	?		1980-2018	deficient	
Czechia	1500–2000	1	2014-2017	complete	0		2007-2018	expert	+		1980-2018	expert	
Denmark	5	<1	2016-2016	complete	+		2006-2017	expert	?		1980-2017	complete	
Estonia	100–200	<1	2013-2017	partial	0		2007-2018	partial	-	-220 to 7	1987-2018	partial	
Finland	1800–4200	2	2013-2018	partial	-	-57 to -34	2007-2018	complete	-	-65 to -51	1982-2018	complete	
France	100–800	<1	2009-2018	expert	?		2007-2017	expert	F	-80 to 500	1989-2017	expert	
Georgia	480–4800	1	2013-2017	partial	?			deficient	?				
Germany	3300–6000	3	2016-2016	expert	0		2004-2016	expert	+		1985-2016	expert	
Greece	10–100	<1	2015	partial	0		2007-2018	partial	?		1980-2018	deficient	
Italy	1500–3500	2	2013-2018	expert	?		2007-2018	deficient	+	15 to 50	1993-2018	expert	
Kosovo	5	<1	2007-2019	expert	?		2007-2018	deficient	?		1990-2018	partial	
Latvia	1000–3700	1	2017-2017	complete	?	-80 to 980	2007-2018	complete	-	-98 to -70	1990-2018	complete	
Lithuania	500–700	<1	2013-2018	partial	0		2013-2018	partial	+	10 to 30	1980-2018	partial	
Luxembourg	0–1	<1	2013-2018	expert	?		2007-2018	expert	?		1980-2018	expert	
North Macedonia	100–500	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Montenegro	600–1200	<1	2013-2018	partial	0		2007-2018	expert	?				
Norway	2000–15000	4	2013-2018	deficient	F		2013-2018	expert	?		1980-2018	partial	
Poland	1200–2400	1	2013-2018	expert	0	-31 to 45	2010-2018	complete	+	20 to 30	1980-2018	expert	
Romania	3000–5000	3	2013-2018	expert	?		2007-2018	deficient	?		1980-2018	deficient	
Russia	65000–75000	48	2008-2018	partial	F		2008-2018	expert	0		1980-2018	expert	
Serbia	140–260	<1	2013-2018	complete	0	0	2007-2018	complete	-	-29 to -10	1980-2018	complete	
Slovakia	1400–1800	1	2013-2018	partial	0		2007-2018	partial	0		1980-2018	partial	
Slovenia	450–850	<1	2002-2017	partial	F		2002-2017	partial	0		1980-2017	partial	
Spain	150	<1	2012	complete	0		2000-2018	partial	0		1980-2018	expert	

Aegolius funereus (Boreal Owl)

Table 1. Reported national breeding population size and trends in Europe¹.

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	
Sweden	1700–91000	22	2013–2018	partial	F	-50 to 150	2007–2018	partial	-	-50 to -10	1980–2018	partial	
Switzerland	1000–3000	1	2013–2016	partial	0	-10 to 5	2007–2018	complete	0	-7 to 3	1990–2018	complete	
Turkey	50–100	<1	2002–2018	expert	?		2012–2018	deficient	?		1980–2013	deficient	
Ukraine	300–400	<1	2014–2019	partial	F	40 to 50	2007–2019	partial	F	30 to 50	1980–2019	partial	
EU28	20900–128000	40											
Europe	94600–236000	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) Deficient: 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 ($\geq 50\%$) | ↓ Large decrease ($\geq 50\%$) |
| ↑ 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: $\geq 10\%$ 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.

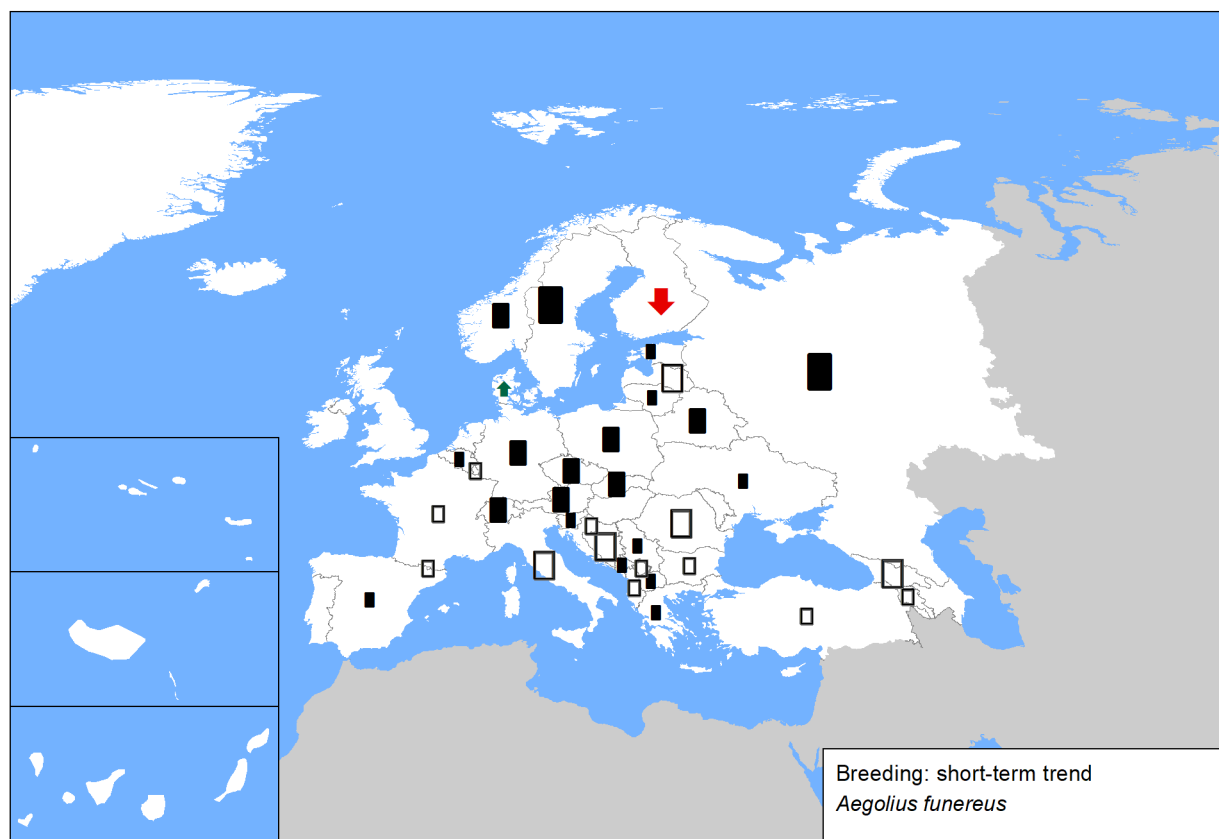
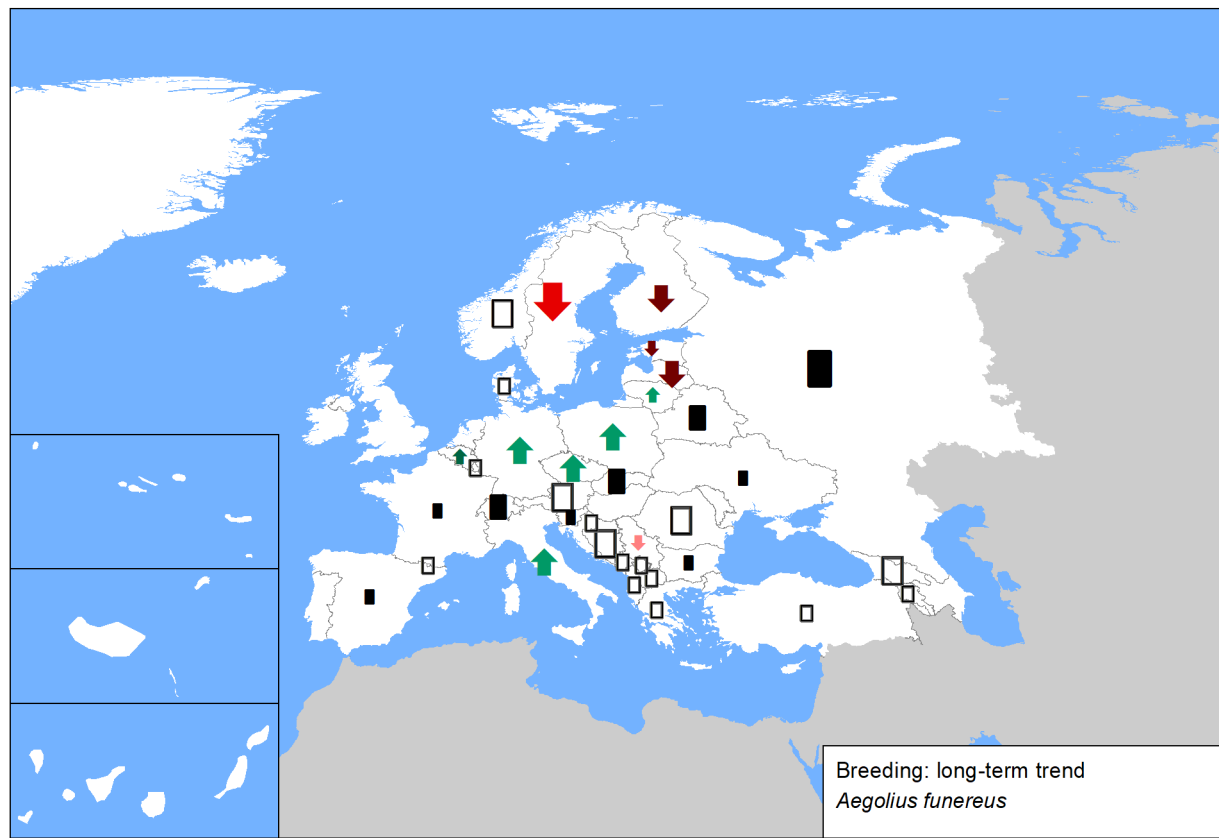


Figure 2. Breeding population sizes and long-term trends across Europe.



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, unpublished data from www.ornitho.at
Breeding short-term trend: BirdLife Austria, unpublished data from www.ornitho.at; BirdLife Austria, unpublished archive data
Breeding long-term trend: BirdLife Austria, unpublished archive data

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.; National Art. 12 reporting database 2013-2018; Golemansky (ed.) (2011) Red Data Book of Bulgaria. Vol.2 Animals. http://e-ecodb.bas.bg/rdb/en/vol2/ Shurulinkov P., G. Stoyanov, P. Tzvetkov, K. Vultchev, R. Kolchagov, M. Ilieva (2003) Distribution and abundance of Tengmalm's Owl <i>Aegolius funereus</i> on Mount Pirin, south-west Bulgaria. Sandgrouse, 25(2): 103-117 Shurulinkov P., G. Stoyanov (2005) New data on the distribution of Tengmalm's Owl (<i>Aegolius funereus</i>) in Western Bulgaria. Buteo, 14: 61-66 Shurulinkov P., G.Stoyanov (2006) Some new findings of Pigmy Owl <i>Glaucidium passerinum</i> and Tengmalm's Owl <i>Aegolius funereus</i> in Western and Southern Bulgaria. Acrocephalus, 27 (128-129): 65-68 Shurulinkov P.,G.Stoyanov, E.Komitov, G.Daskalova, A.Ralev (2012) Contribution to the knowledge on distribution,number and habitat preferences of rare and endangered birds in Western Rhodopes Mts.Southern Bulgaria. Strigiformes and Piciformes. Acta zoologica bulgarica., 64(1): 43-56.
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.; National Art. 12 reporting database 2013-2018; Golemansky (ed.) (2011) Red Data Book of Bulgaria. Vol.2 Animals. http://e-ecodb.bas.bg/rdb/en/vol2/ Nikolov, B., I. Hristov, P. Shurulinkov, I. Nikolov, A. Rogyev, A. Dutsov, R. Stanchev. 2001. New data on some poorly known forest owls (<i>Strix uralensis</i> , <i>Glaucidium passerinum</i> , <i>Aegolius funereus</i>) in Bulgaria. – Forestry Science, 38(1/2): 75-86. Shurulinkov P., G. Stoyanov, P. Tzvetkov, K. Vultchev, R. Kolchagov, M. Ilieva (2003) Distribution and abundance of Tengmalm's Owl <i>Aegolius funereus</i> on Mount Pirin, south-west Bulgaria. Sandgrouse, 25(2): 103-117 Shurulinkov P., G. Stoyanov (2005) New data on the distribution of Tengmalm's Owl (<i>Aegolius funereus</i>) in Western Bulgaria. – Buteo, 14: 61-66 Shurulinkov P., G.Stoyanov (2006) Some new findings of Pigmy Owl <i>Glaucidium passerinum</i> and Tengmalm's Owl <i>Aegolius funereus</i> in Western and Southern Bulgaria. Acrocephalus, 27 (128-129): 65-68 Shurulinkov P.,G.Stoyanov, E.Komitov, G.Daskalova, A.Ralev (2012) Contribution to the knowledge on distribution, number and habitat preferences of rare and endangered birds in Western Rhodopes Mts.Southern Bulgaria. Strigiformes and Piciformes. Acta zoologica bulgarica., 64(1): 43-56.
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. Simeonov S. (1985) Tengmalm's Owl(<i>Aegolius funereus</i>) In: Red data Book of PR Bulgaria. Vol.2. Animals, BAS, Sofia. Spiridonov, J., L. Mileva (1988) Endangered and rare bird species in "Steneto" biosphere reserve. – Orn. Inf. Bull. 23/24: 99–105. (in Bulgarian) Spiridonov, J., Spassov, N., Mileva, L. (1982) New data on the distribution of the Ural Owl (<i>Strix uralensis</i>) and Tengmalm's Owl (<i>Aegolius funereus</i>) in Bulgaria. Nat. Conf. of Nature Protection, 1–5.09.1982, Sunny Beach 1: 341–343. (in Bulgarian)

Aegolius funereus (Boreal Owl)

Croatia

Breeding population size: Zavod za ornitologiju (Sanja Barišić, Davor Čiković, 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 Lesković, Duje Lisičić, Ivica Lolić, Gordan Lukač, Kristijan Mandić, Krešimir Mikulić, Tibor Mikuska, Gvido Piasevoli, Andrej Radalj, Zlatko Ružanović, Vlatka Ščetarić, Mirko Šetina, Adrian Tomik (2015): Procjene brojnosti za SPA područja. Državni zavod za zaštitu prirode, Zagreb
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 Národní strategie ochrany dravců a sov ČR. Praha 2017 (manuscript)
Breeding short-term trend: Národní strategie ochrany dravců a sov ČR. Praha 2017 (manuscript)
Breeding long-term trend: expert opinion

Denmark

Breeding population size: Nielsen, R.D., Holm, T.E., Clausen, P., Bregnballe, T., Clausen, K.K., Petersen, I.K., Sterup, J., Balsby, T.J.S., Pedersen, C.L., Mikkelsen, P. & Bladt, J. (2019). Fugle 2012-2017. NOVANA. Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi. - Videnskabelig rapport nr. 314. http://dce2.au.dk/pub/SR314.pdf and http://novana.au.dk/fugle/
Breeding short-term trend: Nielsen, R.D., Holm, T.E., Clausen, P., Bregnballe, T., Clausen, K.K., Petersen, I.K., Sterup, J., Balsby, T.J.S., Pedersen, C.L., Mikkelsen, P. & Bladt, J. (2019). Fugle 2012-2017. NOVANA. Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi. - Videnskabelig rapport nr. 314. http://dce2.au.dk/pub/SR314.pdf and http://novana.au.dk/fugle/
Breeding long-term trend: Nielsen, R.D., Holm, T.E., Clausen, P., Bregnballe, T., Clausen, K.K., Petersen, I.K., Sterup, J., Balsby, T.J.S., Pedersen, C.L., Mikkelsen, P. & Bladt, J. (2019). Fugle 2012-2017. NOVANA. Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi. - Videnskabelig rapport nr. 314. http://dce2.au.dk/pub/SR314.pdf and http://novana.au.dk/fugle/

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 raptors. http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=2059&Itemid=372
Breeding long-term trend: [1] Estonian Working Group on Bird Status and Numbers [2] Monitoring of raptors. http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=2059&Itemid=372

Finland

Breeding population size: Lehtinen, A., Below, A., Jukarainen, A., Laaksonen, T., Lehtinen, 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: Meller, K., Björklund, H., Saurola, P. & Valkama, J. 2019: Kuuma kesä suosi haukkoja — myyräkato masensi pöllöjä. – Linnut-vuosikirja 2018: 80-95. (in Finnish with English summary). Björklund, H., Saurola, P. & Valkama, J. 2018: Breeding and population trends of common raptors and owls in Finland in 2017. – Linnut-vuosikirja 2017: 56–69. (in Finnish with English summary).
Breeding long-term trend: Meller, K., Björklund, H., Saurola, P. & Valkama, J. 2019: Kuuma kesä suosi haukkoja — myyräkato masensi pöllöjä. – Linnut-vuosikirja 2018: 80-95. (in Finnish with English summary). Björklund, H., Saurola, P. & Valkama, J. 2018: Breeding and population trends of common raptors and owls in Finland in 2017. – Linnut-vuosikirja 2017: 56–69. (in Finnish with English summary).

France

Breeding population size: Issa & Muller 2015. Chouette de Tengmalm, Muller & Harter, pages 762-765, in Atlas des oiseaux de France métropolitaine, Issa & Muller 2015. Muller & Harter, Atlas des oiseaux de France métropolitaine 762-765 ; . Tengmalm et chevêchette, Bilan du suivi 2016-2017. LPO Mission rapaces, n° 23&24. Mars 2018.
Breeding short-term trend: . Tengmalm et chevêchette, Bilan du suivi 2015-2016. LPO Mission rapaces, n°21&22. avril 2017.. Tengmalm et chevêchette,

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) Βλάχος Χ., Μπίρτσας Π., Θωμάϊδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Α.Μ., Κασάμπας 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) Βλάχος Χ., Μπίρτσας Π., Θωμάϊδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Α.Μ., Κασάμπας 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.

Aegolius funereus (Boreal Owl)

Greece

Breeding long-term trend: no data available
--

Italy

Breeding population size: BirdLife International 2004. Birds in Europe: population estimates, trends and conservation status Cambridge, UK: BirdLife International. BirdLife Conservation Series No. 12 Brichetti P & Fracasso G. 2006. Ornitologia italiana. Vol.3 (Stercorariidae-Capri)
Breeding short-term trend: No recent data available
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: Unpublished data for species conservation activity plan (draft); Expert: Andris Avotiņš jun., avotins.puces@gmail.com
Breeding short-term trend: Unpublished data for species conservation activity plan (draft); Expert: Andris Avotiņš jun., avotins.puces@gmail.com
Breeding long-term trend: Unpublished data for species conservation activity plan (draft); Expert: Andris Avotiņš jun., avotins.puces@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. Ministry of Environment of the Republic of Lithuania. 2016-2018. Leidinio "Lietuvos raudonoji knyga" parengimo paslaugos (Red data book of Lithuania). (Agreement No VPS-2016-104-ES)
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. Ministry of Environment of the Republic of Lithuania. 2016-2018. Leidinio "Lietuvos raudonoji knyga" parengimo paslaugos (Red data book of Lithuania). (Agreement No VPS-2016-104-ES)
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). 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. Ministry of Environment of the Republic of Lithuania. 2016-2018. Leidinio "Lietuvos raudonoji knyga" parengimo paslaugos (Red data book of Lithuania). (Agreement No VPS-2016-104-ES)

Luxembourg

Breeding population size: Ornitho.lu (2018): online database natur&mwelt 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&mwelt Luxembourg. ISBN: 978-2-919920-01-3
Breeding short-term trend: Centrale ornithologique 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

Montenegro

Breeding population size: Rubinić, B., Sackl, P. & Gramatikov, M. (2019): Conserving of wild birds in Montenegro. The first inventory of potential Special Protection Areas in Montenegro. Aam Consulting. Budapest xiii + 328 pp.

Norway

Breeding population size: Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2.
Breeding short-term trend: Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2.
Breeding long-term trend: (a) Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2. (b) Roar Solheim pers. comm.

Poland

Breeding population size: Chodkiewicz T., Kuczyński L., Sikora A., Chylarecki P., Neubauer G., Ławicki Ł., Stawarczyk T. 2015. Ocena liczebności populacji ptaków lęgowych w Polsce w latach 2008–2012. Ornis Polonica 56: 149-194; Wilk T., Bobrek R., Pępkowska-Król A., Neubauer G., Kosicki J. 2016. Ptaki polskich Karpat - stan, zagrożenia, ochrona. OTOP, Marki.
Breeding short-term trend: State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MSL)
Breeding long-term trend: Tucker G.M., Heath M.F. 1994. Birds in Europe: their conservation status. BirdLife International, Cambridge, UK.; BirdLife International 2004. Birds in Europe: population estimates, trends and conservation status. BirdLife International, Cambridge, UK; To

Romania

Breeding population size: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) Database

Aegolius funereus (Boreal Owl)

Romania

Breeding short-term trend: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) 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: Sharikov, expert opinion. avsharikov@ya.ru
Breeding long-term trend: Volkov, expert opinion. owl_bird@mail.ru; Sharikov, expert opinion. avsharikov@ya.ru

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. Karaska D., Trnka A., Krištín A., Ridzoň J.: Chránené vtácie územia Slovenska. ŠOP SR Banská Bystrica, 2015. Černecký, J., Darolová A., Fulín, M., Chavko, J., Karaska, D., Krištín, A. & Ridzoň, J., 2014: Správa o stave vtákov v rokoch 2008 – 2012 na Slovensku. Štátna ochrana prírody Slovenskej republiky, Banská Bystrica, str. 790 Ridzoň et al 2015
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. Karaska D. a kol.: Chránené vtácie územia Slovenska. ŠOP SR Banská Bystrica, 2015.
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.

Slovenia

Breeding population size: Mihelc 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: Mihelc T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdilk 2002–2017. – DOPPS, Ljubljana.
Breeding long-term trend: Mihelc T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdilk 2002–2017. – DOPPS, Ljubljana.

Spain

Breeding population size: Institut Català d'Ornitologia. (2013). Estatus d'amenaça dels ocells nidificants de Catalunya 2012. Llista vermella dels ocells nidificants de Catalunya 2012. Barcelona. (http://www.ornitologia.org/mm/file/quefem/conservacio/Llista_Vermella_2012.pdf)
Breeding short-term trend: Atlas de aves nidificantes de Catalunya 2015-2018, en preparació. (http://www.ornitologia.org/ca/quefem/monitoratge/atles/tercer_atles/index.html)
Breeding long-term trend: BirdLife International. (2004). Birds in Europe: population estimates, trends and conservation status. Cambridge, 374 pp. De Juana, F. (1989). Situación actual de las rapaces diurnas (Orden Falconiformes) en España. Ecología, 3: 237-292. Tucker, G.M. & Heath, M.F. (1994). Birds in Europe: their conservation status BirdLife International (BirdLife Conservation Series n° 3).

Sweden

Breeding population size: Ottosson, U., Ottvall, R., Elmgren, 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, BirdLife Sverige annual reports

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: Murat Bozdoğan, Soner Bekir personal communication (2019), Eken G., Bozdoğan M., İsfendiyaroğlu S., Kılıç D.T., Lise Y. (2006) Türkiye'nin Önemli Doğa Alanları. Doğa Derneği, Ankara. 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: Kuzmenko, pers.
--

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.
- Brazil, M. 2009. *Birds of East Asia: eastern China, Taiwan, Korea, Japan, eastern Russia*. Christopher Helm, London.
- Hagemeijer, E.J.M. and Blair, M.J. 1997. *The EBCC atlas of European breeding birds: their distribution and abundance*. T. and A.D. Poyser, London.
- Holt, D.W., Berkley, R., Deppe, C., Enríquez Rocha, P., Petersen, J.L., Rangel Salazar, J.L., Segars, K.P. and Wood, K.L. 1999. Boreal Owl (*Aegolius funereus*). 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.
- König, C. and Weick, F. 2008. *Owls of the World*. Christopher Helm, London.
- Mikkola, H. 1983. *Owls of Europe*. T. and A. D. Poyser, Calton, U.K.
- Rich, T.D., Beardmore, C.J., Berlanga, H., Blancher, P.J., Bradstreet, M.S.W., Butcher, G.S., Demarest, D.W., Dunn, E.H., Hunter, W.C., Inigo-Elias, E.E., Martell, A.M., Panjabi, A.O., Pashley, D.N., Rosenberg, K.V., Rustay, C.M., Wendt, J.S. and Will, T.C. 2004. *Partners in flight: North American landbird conservation plan*. Cornell Lab of Ornithology, Ithaca, NY.
- Snow, D.W. and Perrins, C.M. 1998. *The Birds of the Western Palearctic, Volume 1: Non-Passerines*. Oxford University Press, Oxford.