Cygnus cygnus (Whooper Swan)

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
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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.

Cygnus cygnus (Whooper Swan)

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]	
Belarus	170–250	<1	2010-2018	partial	+	400 to 500	2012-2019	expert	?		1980-2019	deficient	
Czechia	0–1	<1	2014-2017	complete	+		2002-2016	complete	+		1986-2016	complete	
DK: Faroe Is	5–15	<1	2019	expert	?				?				
Estonia	250–300	<1	2013-2017	expert	+	12 to 93	2006-2017	expert	+	133 to 180	1980-2017	expert	
Finland	8500–12300	26	2013-2018	partial	+	95	2006-2017	partial	+	721	1980-2017	partial	
Germany	50–60	<1	2015-2016	complete	+	101 to 198	2004-2016	complete	+	1362 to 3409	1982-2016	complete	
Hungary	1	<1	2013-2018	complete	0		2007-2018	complete	+	100	1980-2018	complete	
Iceland	5000–9000	15	2015	complete	+		2005-2015	complete	+		1986-2015	complete	
Latvia	430–600	1	2013-2018	partial	+	84 to 89	2012-2018	partial	+	3128 to 3872	1980-2017	partial	
Lithuania	250–400	<1	2013-2018	partial	+	108 to 208	2013-2018	partial	+	2300 to 2500	1980-2018	partial	
Netherlands	2	<1	2013-2017	complete	+	100	2006-2017	complete	+	100	1980-2017	complete	
Norway	350–600	1	2013-2018	complete	+	0 to 5	2013-2018	expert	+	25 to 50	1980-2018	complete	
Poland	120–200	<1	2013-2018	complete	+		2007-2018	complete	+	3500 to 6000	1980-2018	complete	
Russia	11000–17000	33	2008-2018	partial	?		2010-2018	deficient	+	0	1980-2018	expert	
Sweden	7200–9800	21	2013-2018	partial	+	33 to 82	2007-2018	complete	+	1500 to 2000	1980-2018	partial	
Ukraine	2–5	<1	2014-2018	complete	+	100 to 400	2007-2018	complete	+	100 to 400	1980-2018	complete	
United Kingdom	26	<1	2012-2016	complete	+		2001-2016	complete	+		1978-2016	complete	
EU28	16800–23700	50											
Europe	**33400–50600**	**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.

Table 2. Reported national wintering population sizes and trends in Europe[1]. 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)[2]	Population estimate				Short-term population trend[5]				Long-term population trend[5]				Subspecific population (where relevant)
	Size (individuals)[3]	Europe (%)	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	
Albania	5–19	<1	2007-2018	complete	0	0	2007-2018	complete	0	-5 to 0	1980-2018	complete	
Armenia	5–200	<1	2013-2018	partial	?		2007-2018	deficient	?		2003-2018	deficient	
Austria	42–220	<1	2013-2018	complete	0		2007-2018	complete	+		1980-2018	complete	
Azerbaijan	200–7000	<1	1996-2019	partial	F		2010-2019	partial	F		1980-2019	expert	
Belarus	10–100	<1	2013-2018	partial	0	-10 to 10	2000-2012	partial	?				
Belgium	21–70	<1	2013-2018	complete	?	-71 to 141	2007-2018	complete	?	-55 to 72	1992-2018	complete	
Bosnia & HG	5	<1	2015-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Bulgaria	500–1500	<1	2013-2018	partial	+	30 to 50	2000-2018	expert	+	10 to 20	1980-2018	expert	
Czechia	1–3	<1	2015-2019	complete	?		2004-2018	deficient	?		1980-2018	deficient	
Denmark	57500–57600	31	2017-2017	complete	+	160	2006-2017	complete	+	1300	1984-2017	complete	
DK: Faroe Is	20–150	<1	2018		?				?				
Estonia	1000–3000	<1	2013-2017	complete	0	-10 to 0	2006-2017	complete	-	-30 to 0	1980-2017	complete	
Finland	4100	2	2016	partial	+	29 to 85	2007-2018	complete	+	415 to 721	1980-2018	expert	
France	100–210	<1	2013-2018	complete	+	127 to 469	2007-2017	complete	+	889 to 3526	1980-2017	complete	
Georgia	350	<1	2002	deficient	?				?				
Germany	40000	22	2011-2016	complete	+	6 to 22	2003-2016	complete	+	172 to 212	1980-2016	complete	
Greece	20–2100	<1	2013-2018	complete	+		2007-2018	partial	?		1980-2018	deficient	
Iceland	2600	1	2019	complete	+		2002-2014	partial	+		1980-2014	partial	
Rep. Ireland	11800–11900	6	2015	complete	+		2005-2015	complete	+		1986-2015	complete	
North Macedonia	0	<1	2013-2018	complete	0		2010-2019	complete	0		1988-2018	complete	
Moldova	300–480	<1	2018-2019	partial	F		2007-2018	partial	+		1990-2018	expert	
Netherlands	2100–5000	2	2013-2017	complete	?	-1 to 121	2006-2017	complete	+	127 to 423	1981-2017	complete	
Norway	5000–6400	3	1995-2015	complete	0		2013-2018	deficient	-	-15 to -5	1980-2018	complete	
Poland	10000–15000	7	2013-2018	complete	+	39 to 122	2011-2018	complete	?		1980-2018	deficient	
Romania	1000–3700	1	2013-2018	partial	?	-7 to 3	2013-2018	complete	?	0 to 6	2000-2018	complete	
Serbia	5–40	<1	2013-2018	complete	F		2013-2018	complete	+	50 to 79	1980-2018	complete	
Slovenia	0–2	<1	2013-2018	complete	?		2007-2018	deficient	0	0	1980-2018	expert	
Sweden	12000–20000	9	2013-2018	complete	+	40 to 104	2007-2018	complete	+	90 to 129	1980-2018	complete	
Switzerland	31–400	<1	2015-2019	complete	+	15 to 33	2008-2019	complete	+	636 to 734	1980-2019	complete	
Turkey	470–2600	<1	2013-2019	complete	?		2008-2019	deficient	?		1980-2019	deficient	
Ukraine	1000–3000	1	2014-2017	partial	0		2007-2018	partial	F		1980-2018	partial	

Table 2. Reported national wintering population sizes and trends in Europe[1]. 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)[2]	Population estimate				Short-term population trend[5]				Long-term population trend[5]				Subspecific population (where relevant)
	Size (individuals)[3]	Europe (%)	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	
United Kingdom	19500–19600	11	2015	complete	+	39	2005-2016	complete	+	488	1980-2016	complete	
EU28	158000–181000	91											
Europe	**170000–207000**	**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.
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[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

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

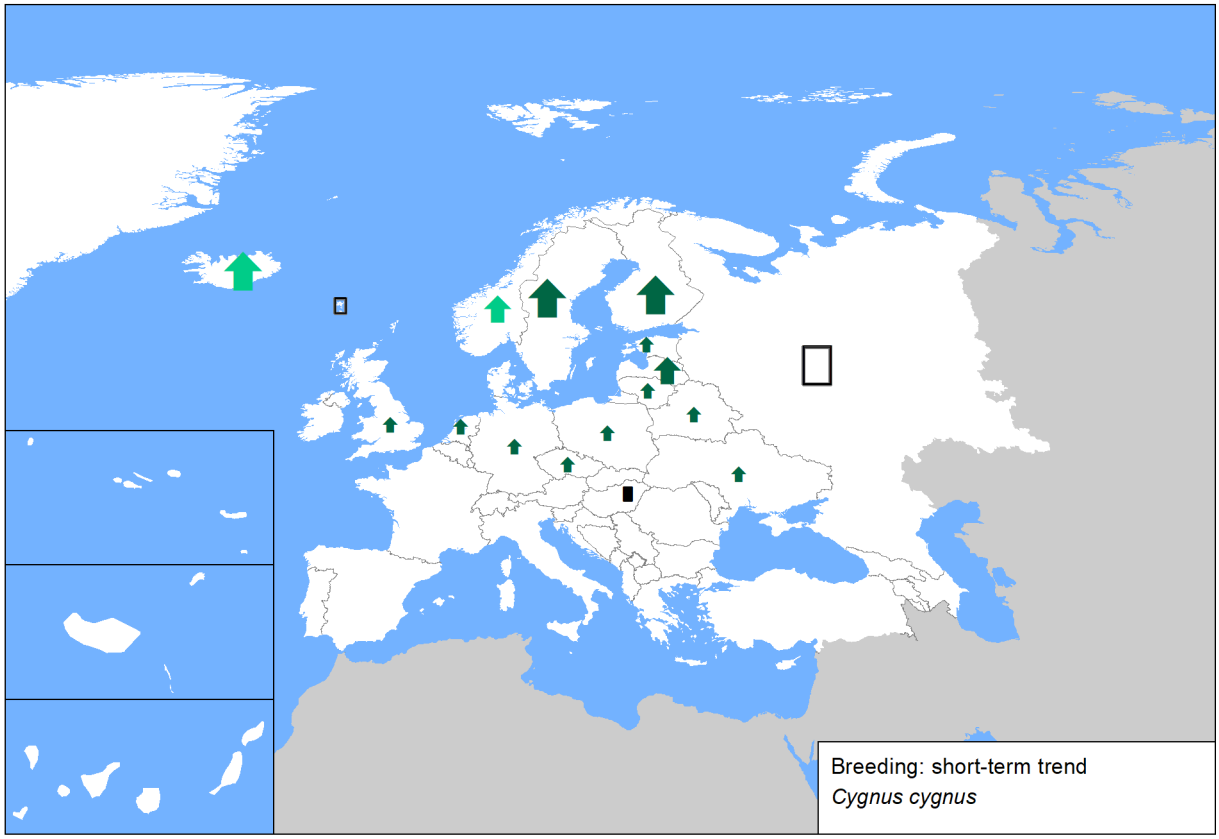


Figure 2. Breeding population sizes and long-term trends across Europe.

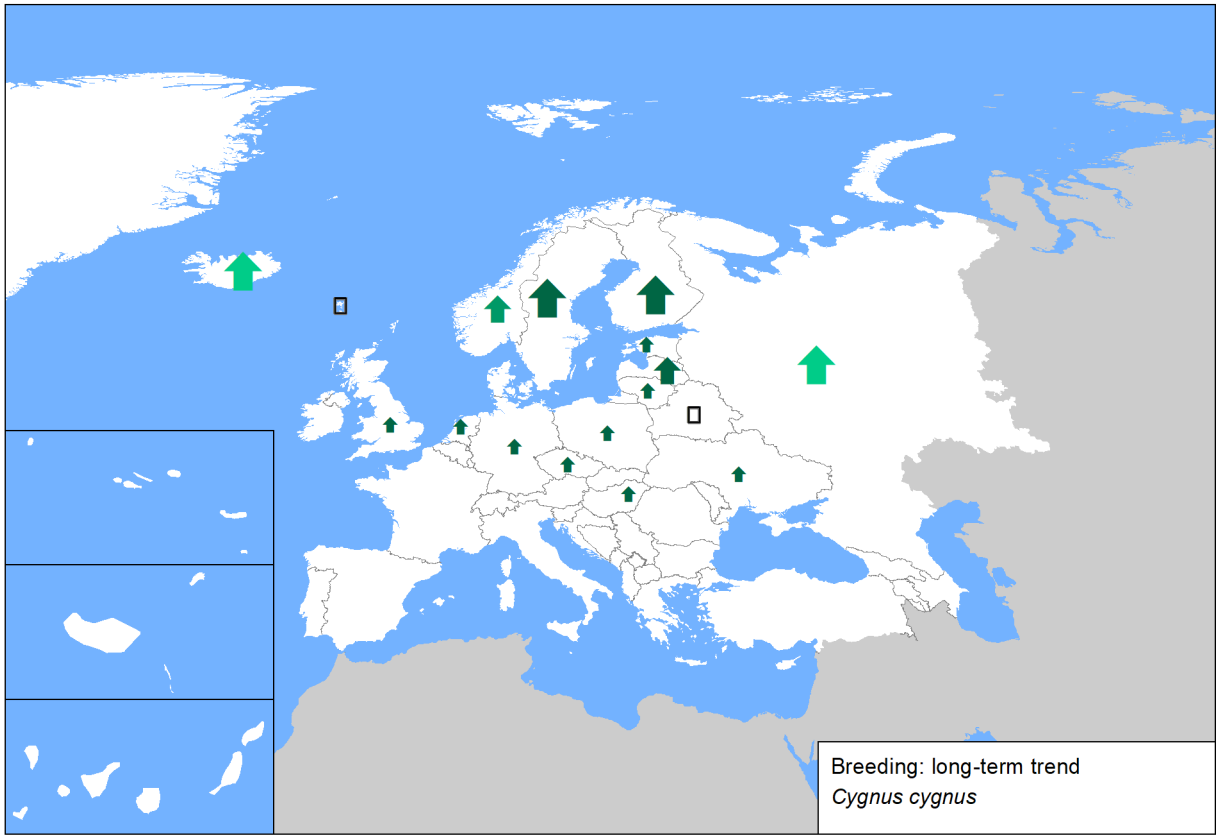


Figure 3. Reported wintering population sizes and short-term trends across Europe. Note that some countries within the species' wintering range did not report any data.

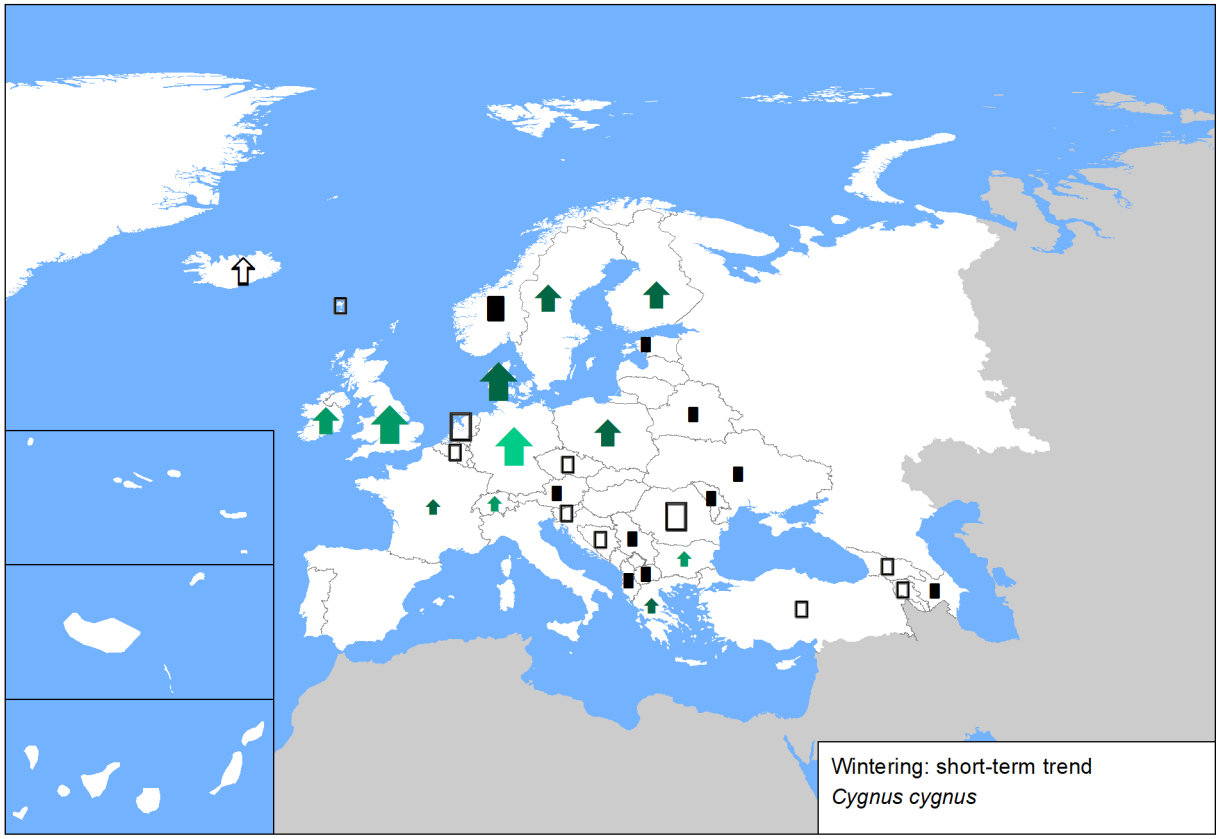
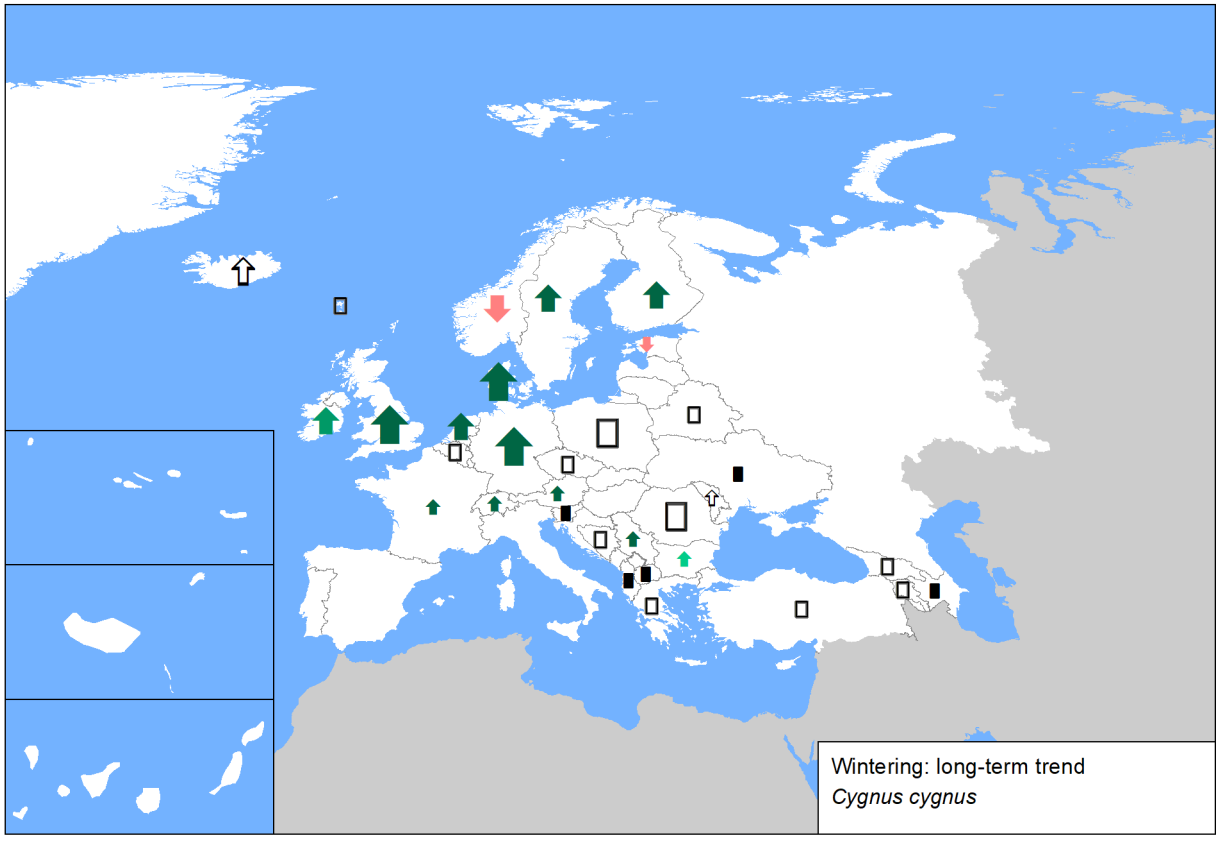


Figure 4. Reported wintering population sizes and long-term trends across Europe. Note that some countries within the species' wintering range did not report any data.



Sources

Albania

Winter population size: Bino pers. obs.
Winter short-term trend: Bino et al. 2018
Winter long-term trend: Bino et al. 2018

Armenia

Winter population size: TSE NGO, National Bird Monitoring
Winter short-term trend: TSE calculations using TRIM
Winter long-term trend: TSE calculations using TRIM

Austria

Winter population size: BirdLife Austria, data of the International Waterfowl Counts (January count)
Winter short-term trend: BirdLife Austria, data of the International Waterfowl Counts (January count)
Winter long-term trend: BirdLife Austria, data of the International Waterfowl Counts (January count)

Azerbaijan

Winter population size: AOS data base
Winter short-term trend: AOS Data Base
Winter 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: Bogdanovich I.A., Nikiforov M.E. Distribution and number of whooper swan (Cygnus cygnus) in Belarus //Vesci Natsiyanal'nay Academii Navuk Belarusi. Ser.biyal.navuk - 2013. – No 1. – P. 78-81
Winter population size: Bogdanovich I.A. - personal communication

Belgium

Winter population size: waterbird database INBO
Winter short-term trend: Waterbird database INBO & Aves
Winter long-term trend: Waterbird database INBO & Aves

Bosnia and Herzegovina

Winter population size: based on IWC reports-all reports published in magazine Bilten mreže posmatrača ptica (www.ptice.ba)
Winter short-term trend: based on IWC reports-all reports published in magazine Bilten mreže posmatrača ptica (www.ptice.ba)
Winter long-term trend: There are no qualitative data before 2005 to make estimates

Bulgaria

Winter population size: Wetlands International (2019): Submitted IWC data for Bulgaria for period 2013-2018.; National Art. 12 reporting database 2013-2018; National workshop of experts, Sofia 27-29.8.2019
Winter short-term trend: Mid-winter count of waterfowl; National Art. 12 reporting database 2013-2018; BSPB Bird Database; Golemansky V. (ed.) 2011. Red Data Book of the Republic of Bulgaria. Digital edition, Vol. 2, Animals. BAS-MOEW, Sofia, http://e-ecodb.bas.bg/rdb/en/vol2/; Dimitrov, M., T. Michev, L. Profirov, K. Nyagolov. 2005. Waterbirds of Bourgas Wetlands: Results and Evaluation of the Monthly Waterbirds Monitoring 1996-2002. Bulgarian Biodiversity Foundation and Publ. House Pensoft, Sofia, 160 pp.;
Winter long-term trend: Mid-winter count of waterfowl BSPB Bird Database Golemansky V. (ed.) 2011. Red Data Book of the Republic of Bulgaria. Digital edition, Vol. 2, Animals. BAS-MOEW, Sofia, http://e-ecodb.bas.bg/rdb/en/vol2/

Czechia

Breeding population size: Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017
Breeding short-term trend: Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017
Breeding long-term trend: Šťastný et al. 2006

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Winter population size: Waterbird numbers were recorded in mid-January by regular citizen-science monitoring programme - the International Waterbird Census (IWC) – see Gilissen et al. 2002, Wetlands International 2006, Wetlands International 2019. Hundreds of volunteer birdwatchers conduct the mid-January counts on predetermined dates and sites each year, aiming to maximize synchrony (Gilissen et al. 2002, Musil et al. 2011, Musilová et al. 2014). The estimation of population size was calculated by Trends and Indices for Monitoring data (TRIM) software (Statistics Netherlands version 3.52, Pannekoek and Van Strien, 2005). 'Time Totals' values of the data (i.e. the actual count values plus the numbers of birds estimated by the TRIM software) for all 1155 sites included in the analysis were used to generate total estimates of the range of numbers of the waterbird species wintering in the Czech Republic between 2015 and 2019. We use the range (min–max) of population estimates due to the effect of between-year variation in numbers because of variable climatic conditions (Musil et al. 2008, Musilová et al. 2018). Gilissen N, Haanstra L, Delany S, Boere G, Hagemeijer W (2002) Numbers and distribution of wintering waterbirds in the Western Palearctic and Southwest Asia in 1987, 1988 and 1999. Results from the International Waterbird Census. Wetlands International Global Series No. 11, Wetlands International, Wageningen, The Netherlands. Musil P, Darolová A, Jureček J, Musilová Z, Podhrázský M, Slabeyová K (2008) The long-term trends in numbers of wintering geese in the Czech Republic and Slovakia in 1991–2007. Tichodroma 20: 61–67. Musil P, Musilová Z, Fuchs R, Poláková S (2011) Long-term changes in numbers and distribution of wintering waterbirds in the Czech Republic, 1966–2008. Bird Study 58: 450–460. Musilová Z, Musil P, Zouhar J, Adam M (2018) Changes in habitat suitability influence non-breeding distribution of waterbirds in central Europe. Ibis: 160: 582–596. Musilová Z, Musil P, Zouhar J, Bejček V, Šťastný K, Hudec K (2014) Numbers of wintering waterbirds in the Czech Republic: long-term and spatial-scale approaches to assess population size. Bird Study 61: 321–331.
Winter short-term trend: no data
Winter long-term trend: no data

Denmark

Winter 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/
Winter 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/
Winter 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/

DK: Faroe Is

Estonia

Breeding population size: Estonian Working Group on Bird Status and Numbers
Breeding short-term trend: Estonian Working Group on Bird Status and Numbers
Breeding long-term trend: Estonian Working Group on Bird Status and Numbers
Winter population size: Estonian Working Group on Bird Status and Numbers
Winter short-term trend: Estonian Working Group on Bird Status and Numbers
Winter long-term trend: Estonian Working Group on Bird Status and Numbers

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.
Winter population size: Lehikoinen, A., Kuntze, K., Lehtiniemi, T., Mikkola-Roos, M. & Toivanen, T. 2017: Suomen keskitalven vesilintukantojen kannanarviot vuonna 2016 muuttuva Suomi osana kansainvälistä seurantaa. Summary: Winter population estimates of waterbirds in Finland in January 2016. - Linnut-vuosikirja 2016:6-15.
Winter short-term trend: Winter bird censuses of the Finnish Museum of Natural History, University of Helsinki.
Winter long-term trend: Winter bird censuses of the Finnish Museum of Natural History, University of Helsinki.

France

Winter population size: . Gaudard C., Quaintenne G. & Dupuis J. (2019) Comptage des Oiseaux d'eau à la mi-janvier en France. Résultats 2018 du comptage Wetlands International. pp. 24 (& Annexes pp. 104). LPO BirdLife France - Service Connaissance, Wetlands International, Ministère de la Transition écologique et solidaire, Rochefort, France. .
Winter short-term trend: . Quaintenne G. & Gaudard C. (2018) Analyses de tendances oiseaux d'eau recensés en France à la mi-janvier 1980-2017. Rapport technique préalable à la rédaction de la synthèse Wetlands de Gaudard et al. (2018), pp. 53. Ligue Pour la Protection des Oiseaux, BirdLife France - Wetlands International, Rochefort, France..
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Georgia

Winter population size: BirdLife International 2004

Germany

Breeding population size: Monitoring seltener Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ga&subsubcat=kontakt)
Breeding short-term trend: Monitoring seltener Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ga&subsubcat=kontakt)
Breeding long-term trend: Monitoring seltener Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ga&subsubcat=kontakt)

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Germany

Winter population size: Dachverband Deutscher Avifaunisten e.V. (http://www.dda-web.de)
Winter short-term trend: Dachverband Deutscher Avifaunisten e.V. (http://www.dda-web.de)
Winter long-term trend: Dachverband Deutscher Avifaunisten e.V. (http://www.dda-web.de)

Greece

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Winter long-term trend: no data available

Hungary

Breeding population size: Expert opinions
Breeding short-term trend: Expert opinions
Breeding long-term trend: MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. p. 278. Annual reports of the Hungarian Checklist and Rarities Committee.

Iceland

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Breeding short-term trend: Hall, C., O. Crowe, G. McElwaine, Ó. Einarsson, N. Calbrade og E. Rees 2016. Population size and breeding success of the Icelandic Whooper Swan Cygnus cygnus: results of the 2015 international census. Wildfowl 66: 75–97.
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Winter population size: Icelandic Institute of Natural History. Mid-winter bird counts, https://www.ni.is/greinar/vetrarfuglatalningar-nidurstodur; Icelandic Institute of Natural History, unpubl.data.
Winter short-term trend: Icelandic Institute of Natural History. Mid-winter bird counts, https://www.ni.is/greinar/vetrarfuglatalningar-nidurstodur; Icelandic Institute of Natural History, unpubl.data.
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Latvia

Breeding population size: Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv
Breeding short-term trend: Boiko D. 2011. Whooper Swan Cygnus cygnus (L.) in Latvia – its breeding population, wintering, moulting and dispersal geography. Thesis. Daugavpils University. Expert: Dmitrijs Boiko, dmitrijs.boiko@ldm.gov.lv Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv
Breeding long-term trend: Priednieks J., Strazds M., Strazds A., Petrins A. 1989. Latvian Breeding Bird Atlas 1980-1984. Riga: Zinatne Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv

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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)

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North Macedonia

Winter population size: unpublished IWC data of the Macedonian Ecological Society

Winter short-term trend: unpublished IWC data of the Macedonian Ecological Society

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Moldova

Winter population size: International Waterbird Census

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

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

Netherlands

Breeding population size: Sovon NEM (Sovon, CBS and provincies) and Bird atlas (Sovon 2018)

Breeding short-term trend: Sovon

Breeding long-term trend: Sovon

Winter population size: NEM waterbird monitoring scheme (Sovon, RWS, CBS, provincies)

Winter short-term trend: NEM waterbird monitoring scheme (Sovon, RWS, CBS, provincies)

Winter long-term trend: NEM waterbird monitoring scheme (Sovon, RWS, CBS, provincies)

Norway

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

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Poland

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Winter population size: State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MZPW – Wintering Waterbird Survey & MZPM – Wintering Seabirds Survey); Arkadiusz Sikora, Przemysław Wylegała et al. - unpublished information

Poland

Winter short-term trend: State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MZPW)
Winter long-term trend: Chief Inspectorate of Environmental Protection & Polish Society for the Protection of Birds (OTOP) / BirdLife Poland

Romania

Winter population size: International Waterbird Census, Romania, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database
Winter short-term trend: International Waterbird Census, Romania, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database
Winter long-term trend: International Waterbird Census, Romania, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) 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: Fetisov 2014
Breeding long-term trend: Yakovleva 2008; Fetisov 2014; Krivenko & Vinogradov 2008

Serbia

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

Slovenia

Winter population size: Božič L. (2013): Rezultati januarskega štetja vodnih ptic leta 2013 v Sloveniji. – Acrocephalus 34 (156/157): 93–103. Božič L. (2014): Rezultati januarskega štetja vodnih ptic leta 2014 v Sloveniji. – Acrocephalus 35 (160/161): 73–83. Božič L. (2015): Rezultati januarskega štetja vodnih ptic leta 2015 v Sloveniji. – Acrocephalus 36 (164/165): 57–67. Božič L. (2016): Rezultati januarskega štetja vodnih ptic leta 2016 v Sloveniji. – Acrocephalus 37 (170/171): 209–219. Božič L. (2017): Rezultati januarskega štetja vodnih ptic leta 2017 v Sloveniji. – Acrocephalus 38 (174/175): 203–215. Božič L. (2018): Rezultati januarskega štetja vodnih ptic leta 2018 v Sloveniji. – Acrocephalus 39 (178/179): xx–xx.
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Winter population size: Strebel, N. (2019): Überwinternde Wasservögel in der Schweiz: Ergebnisse der Wasservogelzählungen 2018/2019. Schweizerische Vogelwarte, Sempach./Strebel, N. (2019): Monitoring hivernal des oiseaux d'eau en Suisse: Résultats des recensements des oiseaux d'eau 2018/2019. Station ornithologique suisse, Sempach.
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Turkey

Winter population size: Ebird Datebase and Midwinter Fowl Counts (2013-2018), Birdlife Estimate
Winter short-term trend: Midwinter bird counts 2012-2019
Winter long-term trend: Midwinter bird counts 1980-2019 and Historical Records come from OSME and other midwinter counts

Ukraine

Breeding population size: S. Gashchak, pers.

Cygnus cygnus (Whooper Swan)

Ukraine

Breeding short-term trend: S. Gashchak, pers.
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Breeding population size: RBBP; Holling, M. & the Rare Breeding Birds Panel. 2018. Rare breeding birds in the United Kingdom in 2016. British Birds 111: 644-694.
Breeding short-term trend: RBBP; Holling, M. & the Rare Breeding Birds Panel. 2018. Rare breeding birds in the United Kingdom in 2016. British Birds 111: 644-694.
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