

***Bucephala clangula* (Common Goldeneye)**

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).

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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.

Bucephala clangula (Common Goldeneye)

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	
Austria	25–30	<1	2013-2018	complete	+	30 to 60	2007-2018	partial	+	3000 to 6000	1981-2018	complete	
Belarus	3200–4000	<1	2010-2018	partial	0	-10 to 10	2012-2019	expert	0	0	1980-2019	expert	
Czechia	100–170	<1	2014-2017	complete	+	0 to 42	2001-2017	complete	-		1981-2017	partial	
Denmark	150	<1	2017	complete	+	37 to 123	2006-2017	complete	+	7573 to 38067	1980-2017	complete	
Estonia	6000–10000	2	2013-2017	partial	0	7 to 34	2006-2017	partial	+	72 to 184	1980-2017	partial	
Finland	113000–130000	28	2013-2018	complete	-	-30 to -17	2007-2018	complete	-	-17 to -5	1986-2018	complete	
France	5	<1	2013-2018	complete	+		2007-2018	complete	+		1999-2018	complete	
Germany	3800–5000	1	2016-2016	expert	+		2004-2016	expert	+		1985-2016	expert	
Latvia	1300–15000	1	2013-2018	expert	0		2010-2017	expert	?		1980-2018	deficient	
Lithuania	2000–2600	<1	2013-2018	partial	+	0 to 5	2013-2018	partial	+	30 to 50	1980-2018	partial	
Netherlands	5–10	<1	2013-2015	complete	?	-68 to 180	2006-2017	complete	0	-9 to 375	1982-2017	complete	
Norway	15000–20000	4	2013-2018	expert	?		2013-2018	deficient	?		1980-2018	partial	
Poland	3000–5000	<1	2013-2018	expert	?		2007-2018	deficient	+	200 to 300	1980-2018	expert	
Romania	2–10	<1	2013-2018	complete	0		2007-2018	expert	?		1980-2018	deficient	
Russia	180000–230000	47	2008-2018	partial	0		2008-2018	expert	?		1980-2018	deficient	
Sweden	57000–73000	15	2013-2018	partial	-	-36 to -18	2007-2018	partial	-	-33 to -1	1980-2018	partial	
Ukraine	50–100	<1	2014-2018	partial	+	10 to 30	2007-2018	partial	+	10 to 30	1980-2018	partial	
United Kingdom	200	<1	2006-2010	partial	-		2001-2016	complete	+		1978-2016	complete	
EU28	187000–241000	48											
Europe	385000–495000	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.

Bucephala clangula (Common Goldeneye)

Table 2. Reported national wintering population sizes and trends in Europe¹. 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	4–150	<1	2007-2018	complete	-	-23 to -20	2007-2018	complete	-	-81 to 0	1980-2018	complete	
Austria	1800–2700	<1	2013-2018	complete	-		2007-2018	complete	-		1981-2014	complete	
Azerbaijan	500–5000	<1	1996-2019	partial	?		2010-2019	partial	?		1980-2019	expert	
Belarus	500–1500	<1	2013-2018	partial	+	10 to 30	2000-2012	partial	?				
Belgium	230–350	<1	2013-2018	complete	-	-54 to -29	2007-2018	complete	-	-45 to -17	1992-2018	complete	
Bosnia & HG	200–500	<1	2015-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Bulgaria	140–400	<1	2013-2018	complete	0	0 to 5	2000-2018	complete	F		1980-2018	complete	
Croatia	2000–2500	<1	2011-2011	expert	?		2007-2018	deficient	?		1980-2013	deficient	
Czechia	1400–2100	<1	2015-2019	complete	+		2008-2019	complete	+		1980-2019	complete	
Denmark	70100–70200	16	2016-2016	complete	0		2006-2017		0		1987-2017		
DK: Faroe Is	0–10	<1	1992		?				?				
Estonia	30000–50000	9	2013-2017	complete	+	20 to 50	2006-2017	complete	+		1980-2017	complete	
Finland	11000–22000	4	2014-2018	complete	+	16 to 61	2007-2018	complete	+	4375 to 7766	1980-2018	complete	
France	1400–1900	<1	2013-2018	complete	-	-40 to -17	2007-2017	complete	-	-33 to -20	1980-2017	complete	
Georgia		<1	2012	deficient	?				?				
Germany	50000	11	2011-2016	complete	-	-22 to -16	2003-2016	complete	0	-13 to -7	1980-2016	complete	
Greece	210–900	<1	2013-2018	partial	0		2007-2018	partial	?		1980-2018	partial	
Hungary	8000–10000	2	2015-2018	partial	F		2007-2018	complete	-	-65 to -35	1996-2018	complete	
Iceland	50–100	<1	2018	partial	0		2002-2014	partial	?		1980-2018	partial	
Rep. Ireland	1200–1300	<1	2011-2016	partial	-		2004-2016	partial	-		1987-2016	partial	
Italy	650–1300	<1	2013-2015	partial	-	-45 to -30	2009-2015	partial	-	-80 to -55	1991-2015	partial	
Latvia	4900–11400	2	2013-2018	complete	?	-40 to 22	2009-2018	complete	+	206 to 386	1991-2018	complete	
Lithuania	3300–8300	1	2013-2018	complete	0	0	2013-2018	partial	?		1980-2018	deficient	
Luxembourg	4–20	<1	2013-2018	complete	-	-80 to -60	2007-2018	complete	F		1980-2018	partial	
North Macedonia	50–100	<1	2013-2018	complete	0		2010-2019	complete	0		1988-2018	complete	
Moldova	10000–15000	3	2018-2019	partial	+		2007-2018	partial	0		1990-2018	expert	
Montenegro	800–3000	<1	2013-2018	expert	0		2007-2018	expert	?				
Netherlands	7400–10500	2	2013-2017	complete	-	-43 to -22	2006-2017	complete	-	-37 to -14	1981-2017	complete	
Norway	31000	7	1994-2018	partial	?		2013-2018	deficient	?		1980-2018	deficient	
Poland	22700–37300	6	2013-2018	complete	+	25 to 64	2011-2018	complete	?		1980-2018	deficient	
Romania	3000–13400	2	2013-2018	partial	-	-6 to -1	2013-2018	complete	+	4 to 9	2000-2018	complete	

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Table 2. Reported national wintering population sizes and trends in Europe¹. 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	
Russia	1000–8000	<1	2010-2019	partial	F		2008-2019	partial	-	-49 to -30	2004-2019	partial	
Serbia	3000–6000	1	2013-2018	complete	F		2013-2018	complete	-	-49 to -30	1980-2018	partial	
Slovakia	4000–8000	1	2013-2018	complete	-	-70 to -40	2007-2018	complete	+	200 to 400	1980-2018	complete	
Slovenia	520–1200	<1	2013-2018	complete	0		2007-2018	complete	-	-70 to -60	1980-2018	expert	
Sweden	70000–110000	21	2013-2018	complete	0	-3 to 16	2007-2018	complete	+	156 to 186	1980-2018	complete	
Switzerland	1700–2700	<1	2015-2019	complete	-	-55 to -53	2008-2019	complete	-	-54 to -53	1980-2019	complete	
Turkey	6–100	<1	2013-2019	complete	?		2008-2019	deficient	?		1980-2019	deficient	
Ukraine	9000–16000	3	2014-2017	partial	0		2007-2018	partial	F		1980-2018	partial	
United Kingdom	21200–21300	5	2012-2016	complete	-		2005-2016	complete	0		1980-2016	complete	
EU28	312000–424000	83											
Europe	373000–526000	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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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

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

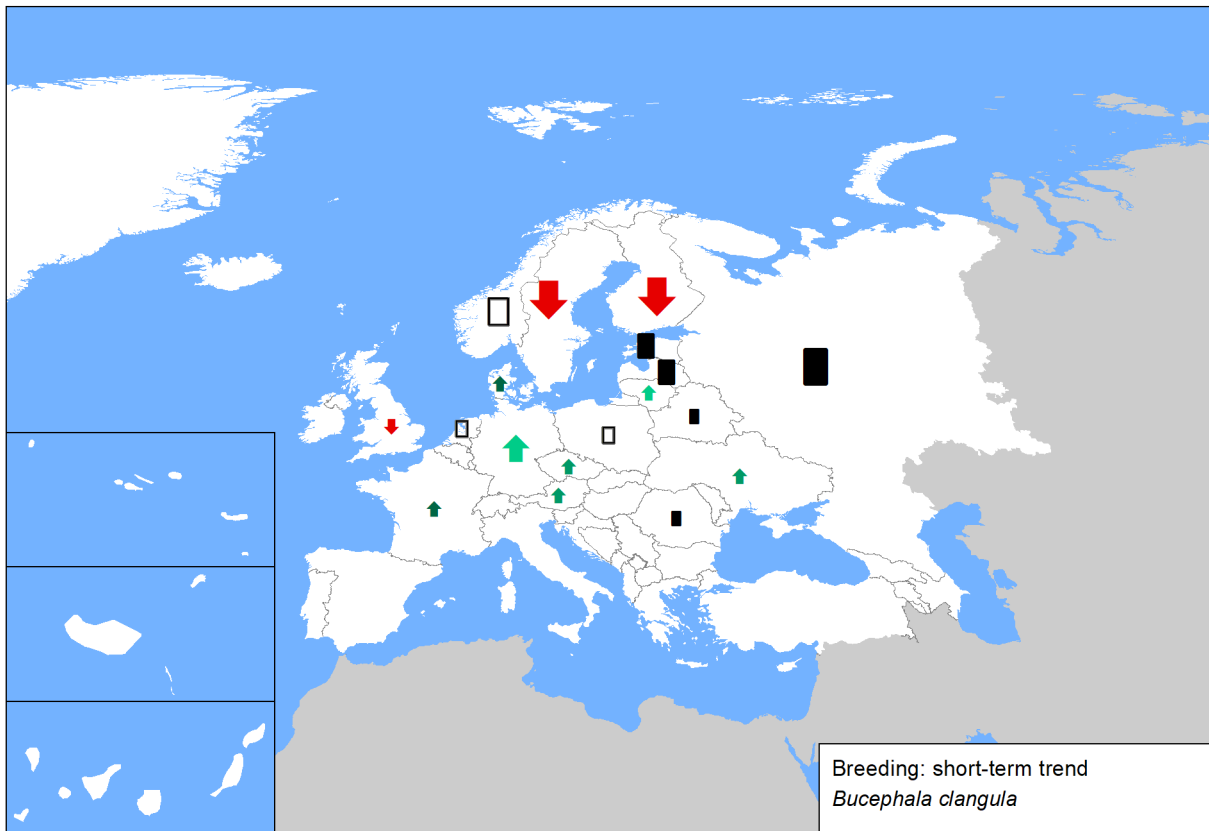
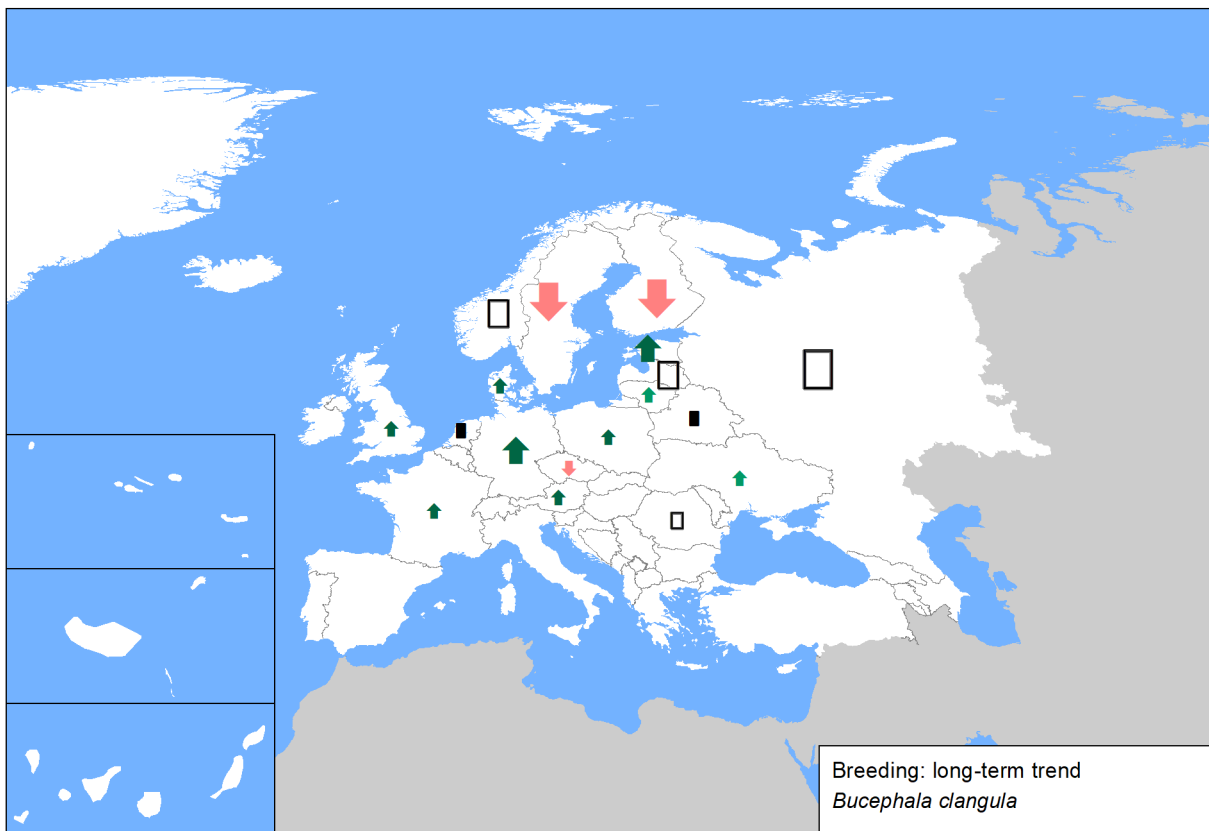


Figure 2. Breeding population sizes and long-term trends across Europe.



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Sources

Albania

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

Austria

Breeding population size: BirdLife Austria, unpublished data from www.ornitho.at ; Weißmair (2017)
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
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, unpublished data based on indices calculated by the program TRIM

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: Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p.
Winter population size: Bogdanovich I.A. - personal communication
Winter short-term trend: 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: BSPB GIS related ornithological database; National Art. 12 reporting database 2013-2018;
Winter long-term trend: BSPB GIS related ornithological database; Michev, T., L. Profirov. 2003. Midwinter Numbers of Waterbirds in Bulgaria (1977-2001). Results from 25 years of mid-winter count carried out at the most important Bulgarian Wetlands. Publ. House Pensoft, Sofia, 160 pp.;

Croatia

Winter population size: Report on the implementation of AEWA for the period 2009-2011 - Croatia. http://www.unep-aewa.org/en/document/national-report-croatia-2
Winter short-term trend: no data available
Winter 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: Trends in waterbird breeding population size were estimated using changes in population data from nation-wide numbers project of "Atlas of Breeding Bird Distribution" carried out in whole Czech Republic in 2001 -2003 and 2014 – 2017. Range of relative change in breeding population size was used as the measurement of population trend. The values of relative rate of change were compared with data from annual monitoring (census in May – see Musil & Fuchs 1994, Musil et al. 2001, Čehovská et al. 2019 for the methods) on limited amount of sites (fishpond regions in south and central Bohemia - see Musil & Fuchs 1994). Čehovská M., Musil P., Musilová Z., Poláková, K. & Zouhar J. 2019: Diving duck census efficiency based on monitoring of individually marked females: the influence of breeding stage of individual females and timing of census. Bird Study in press. Musil P. Cepák J. Hudec K. & Zárbybnický J. 2001. The long-term trends in the breeding waterfowl populations in the Czech Republic. OMPO, Institute of Applied Ecology, Kostelec nad Černými lesy. Musil P. & Fuchs R. 1994: Changes in abundance of water birds species in southern Bohemia (Czech Republic) in the last 10 years. Development in Hydrobiologia. In: Kerekes J. J. [ed.]: Aquatic Birds in Trophic Web of Lakes. Hydrobiologia 279/280: 511–519.

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Czechia

Breeding long-term trend: The long-term trends were analysed using data from annual waterbird census carried out in May (see Musil & Fuchs 1994, Musil et al. 2001, Čehovská et al. 2019 for the methods) on limited amount of sites (fishpond regions in south and central Bohemia – see Musil & Fuchs 1994). The individual species trends in numbers were calculated by Trends and Indices for Monitoring data (TRIM) software (Statistics Netherlands version 3.52, Pannekoek and Van Strien, 2005). The additive slope (i.e. the change in indices from one year to the next) was used to estimate the Czech trend, see also Fouque et al. (2009), Musil et al. (2011). Čehovská M., Musil P., Musilová Z., Poláková, K. & Zouhar J. 2019: Diving duck census efficiency based on monitoring of individually marked females: the influence of breeding stage of individual females and timing of census. Bird Study in press. Fouque C, Guillemain M, Schricke V (2009) Trends in the numbers of Coot *Fulica atra* and wildfowl Anatidae wintering in France and their relationship with hunting activity at wetland sites. Wildfowl. Special Issue Musil P, Cepák J, Hudec K. & Zárbybnický J. 2001. The long-term trends in the breeding waterfowl populations in the Czech Republic. OMPO, Institute of Applied Ecology, Kostelec nad Černými lesy. Musil P. & Fuchs R. 1994: Changes in abundance of water birds species in southern Bohemia (Czech Republic) in the last 10 years. Development in Hydrobiology. In: Kerekes J. J. [ed.]: Aquatic Birds in Trophic Web of Lakes. Hydrobiologia 279/280: 511–519. 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.

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, Hagemeyer 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, Podhrázký 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: 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 individual species trends in numbers was calculated by Trends and Indices for Monitoring data (TRIM) software (Statistics Netherlands version 3.52, Pannekoek and Van Strien, 2005). The additive slope (i.e. the change in indices from one year to the next) was used to estimate the Czech trend, see also Fouque et al. (2009), Musil et al. (2011), Musilová et al. (2015), Musilová et al. (2018 a, b). Fouque C, Guillemain M, Schricke V (2009) Trends in the numbers of Coot *Fulica atra* and wildfowl Anatidae wintering in France and their relationship with hunting activity at wetland sites. Wildfowl. Special Issue 2: 42–59. Gilissen N, Haanstra L, Delany S, Boere G, Hagemeyer 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, 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 (2018a) Changes in habitat suitability influence non-breeding distribution of waterbirds in central Europe. Ibis: 160: 582–596. Musilová Z, Musil P, Zouhar J, Adam M, Bejček V (2018b) Importance of Natura 2000 sites for wintering waterbirds: Low preference, species' distribution changes and carrying capacity of Natura 2000 could fail to protect the species. Biological Conservation 228: 79–88. 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. Musilová Z, Musil P, Zouhar J, Romportl D (2015) Long-term trends, total numbers and species richness of increasing waterbird populations at sites on the edge of their winter range: cold-weather refuge sites are more important than protected sites. J Ornithol: 1–10. Pannekoek J, Van Strien AJ (2005) TRIM 3 Manual (Trends and Indices for Monitoring Data). Statistics Netherlands, Voorburg, The Netherlands. Wetlands International (2006) Waterbird population estimates. Fourth Edition. Wetlands International, Wageningen, The Netherlands. Wetlands International (2019) Waterbird Population Estimates. Available at: wpe.wetlands.org (accessed 10 March 2019).

Winter long-term trend: 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 individual species trends in numbers was calculated by Trends and Indices for Monitoring data (TRIM) software (Statistics Netherlands version 3.52, Pannekoek and Van Strien, 2005). The additive slope (i.e. the change in indices from one year to the next) was used to estimate the Czech trend, see also Fouque et al. (2009), Musil et al. (2011), Musilová et al. (2015), Musilová et al. (2018 a, b). Fouque C, Guillemain M, Schricke V (2009) Trends in the numbers of Coot *Fulica atra* and wildfowl Anatidae wintering in France and their relationship with hunting activity at wetland sites. Wildfowl. Special Issue 2: 42–59. Gilissen N, Haanstra L, Delany S, Boere G, Hagemeyer 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, 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 (2018a) Changes in habitat suitability influence non-breeding distribution of waterbirds in central Europe. Ibis: 160: 582–596. Musilová Z, Musil P, Zouhar J, Adam M, Bejček V (2018b) Importance of Natura 2000 sites for wintering waterbirds: Low preference, species' distribution changes and carrying capacity of Natura 2000 could fail to protect the species. Biological Conservation 228: 79–88. 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. Musilová Z, Musil P, Zouhar J, Romportl D (2015) Long-term trends, total numbers and species richness of increasing waterbird populations at sites on the edge of their winter range: cold-weather refuge sites are more important than protected sites. J Ornithol: 1–10. Pannekoek J, Van Strien AJ (2005) TRIM 3 Manual (Trends and Indices for Monitoring Data). Statistics Netherlands, Voorburg, The Netherlands. Wetlands International (2006) Waterbird population estimates. Fourth Edition. Wetlands International, Wageningen, The Netherlands. Wetlands International (2019) Waterbird Population Estimates. Available at: wpe.wetlands.org (accessed 10 March 2019).

Denmark

Breeding population size: www.dofbasen.dk & Nyegaard, T. et al., Truede og sjældne ynglefugle i Danmark 1998-2012, Dansk Ornitologisk Forenings Tidsskrift 108, nr 1, 2014 & Atlas III 2014-2017 (www.dofbasen.dk/atlas) & DOF BirdLifeDK Fugleåret 2006-2017 &

Breeding short-term trend: www.dofbasen.dk & Nyegaard, T. et al., Truede og sjældne ynglefugle i Danmark 1998-2012, Dansk Ornitologisk Forenings Tidsskrift 108, nr 1, 2014 & Atlas III 2014-2017 (www.dofbasen.dk/atlas) & DOF BirdLifeDK Fugleåret 2006-2017

Breeding long-term trend: www.dofbasen.dk & Nyegaard, T. et al., Truede og sjældne ynglefugle i Danmark 1998-2012, Dansk Ornitologisk Forenings Tidsskrift 108, nr 1, 2014 & Atlas III 2014-2017 (www.dofbasen.dk/atlas) & DOF BirdLifeDK Fugleåret 2006-2017

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/>

Bucephala clangula (Common Goldeneye)

Denmark

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

Winter population size: BirdLife International 2004

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: Väisänen et al. 1998 (Muuttuva pesimälinnusto) gives estimates for mid-1990's. Here, we took the average of TRIM estimates for the years 1994, 1995 and 1996 as a basis to indicate the mean population size estimated by Väisänen et al. (who estimated this on the basis of count data). Thereafter the TRIM index estimate for each year from 2013 to 2018 was divided by the 1994-96 average, to get a multiplier with which the mid-90's estimate was multiplied. Minimum and maximum are the smallest and largest of the annual estimates during the period and best single value is the mean of the estimates for the six years. Lehtinen, A., Jukarainen, A., Laaksonen, T., Lehtiniemi, T., Mikkola-Roos, M., Pessa, J., Rajasärkkä, A., Rusanen, P., Sirkkiä, P., Tiainen, J. & Valkama, J. 2019: Suomen lintujen pesimäkantojen koot. – Linnut-vuosikirja 2018: 38-45.

Breeding short-term trend: Waterfowl monitoring schemes of Finnish Museum of Natural History (LUOMUS) and Natural Resources Institute Finland (LUKE; previously Fisheries and Game Research Institute RKTL).

Breeding long-term trend: Waterfowl monitoring schemes of Finnish Museum of Natural History (LUOMUS) and Natural Resources Institute Finland (LUKE; previously Fisheries and Game Research Institute RKTL).

Winter population size: BirdLife Finland 2019: Tiira bird observation database.

Winter short-term trend: BirdLife Finland 2019: Tiira bird observation database.

Winter long-term trend: Winter bird censuses of the Finnish Museum of Natural History, University of Helsinki.

France

Breeding population size: Malignat P. 2015. Première reproduction du Garrot à oeil d'or *Bucephala clangula* en Picardie. *Avocette* 38 (2), 24-26 http://archives.picardie-nature.org/?action=telecharger_article&article=2102; Malher F., Laporte O., Albesa L., Barth F., Chevalier L., Letourneau C. & Zucca M. 2017. Atlas des oiseaux nicheurs d'Ile-de-France 2009-2014. , Corif, LPO Ile-de-France, ANVL, CERF & Nature Essonne204 p. ; Faune-France 2019. Synthèse des données naturalistes des bases BioloVision France 2013-2018 sur la reproduction du Garrot à Oeil d'Or - *Bucephala clangula*. www.faune-france.org, www.faune-france.org

Breeding short-term trend: Malignat P. 2015. Première reproduction du Garrot à oeil d'or *Bucephala clangula* en Picardie. *Avocette* 38 (2), 24-26 http://archives.picardie-nature.org/?action=telecharger_article&article=2102; Besançon T. 2008. Garrot à oeil d'or *Bucephala clangula*. in Riegel J. & les coordinateurs-espèce (2008) Les oiseaux nicheurs rares et menacés en France en 2007. *Ornithos* 15-3, 153-180 ; Malher F., Laporte O., Albesa L., Barth F., Chevalier L., Letourneau C. & Zucca M. 2017. Atlas des oiseaux nicheurs d'Ile-de-France 2009-2014. , Corif, LPO Ile-de-France, ANVL, CERF & Nature Essonne204 p. ; Faune-France 2019. Synthèse des données naturalistes des bases BioloVision France 2013-2018 sur la reproduction du Garrot à Oeil d'Or - *Bucephala clangula*. www.faune-france.org, www.faune-france.org

Breeding long-term trend: Malignat P. 2015. Première reproduction du Garrot à oeil d'or *Bucephala clangula* en Picardie. *Avocette* 38 (2), 24-26 http://archives.picardie-nature.org/?action=telecharger_article&article=2102; Besançon T. 2008. Garrot à oeil d'or *Bucephala clangula*. in Riegel J. & les coordinateurs-espèce (2008) Les oiseaux nicheurs rares et menacés en France en 2007. *Ornithos* 15-3, 153-180 ; Combrisson D. 1999. Premier cas de reproduction du Garrot à oeil d'or *Bucephala clangula* en France. *Ornithos* 6(3), 138-140 ; Malher F., Laporte O., Albesa L., Barth F., Chevalier L., Letourneau C. & Zucca M. 2017. Atlas des oiseaux nicheurs d'Ile-de-France 2009-2014. , Corif, LPO Ile-de-France, ANVL, CERF & Nature Essonne204 p. ; Faune-France 2019. Synthèse des données naturalistes des bases BioloVision France 2013-2018 sur la reproduction du Garrot à Oeil d'Or - *Bucephala clangula*. www.faune-france.org, www.faune-france.org

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..

Winter long-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..

Georgia

Winter population size: BirdLife International 2004

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.

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Germany

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

Winter population size: 1) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Παπαζογλου, C. & Βαρον, Β. 2009. Προσδιορισμός συμβατών δραστηριοτήτων σε σχέση με τα είδη χαρακτηρισμού των Ζωνών Ειδικής Προστασίας της ορνιθοπανίδας. Παραδοτέο 8. Οδηγός οικολογικών απαιτήσεων, απειλών και ενδεδειγμένων μέτρων για τα είδη χαρακτηρισμού. 2) 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., Κασάμπλας Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΙΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ» Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη. 3) Midwinter Counts Database (1967 - 2019), Hellenic Ornithological Society 4) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife International. ISBN 978-1-912086-00-9, 5) Portolou, D., Bourdakis, S., Vlachos, C., Kastritis, T., and Dimalexis. T. (eds.) 2009. Important Bird Areas of Greece: Priority sites for conservation. Hellenic Ornithological Society. Athens.
Winter short-term trend: 1) Midwinter Counts Database (1967 - 2019), Hellenic Ornithological Society 2) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife International. ISBN 978-1-912086-00-9, 3) Portolou, D., Bourdakis, S., Vlachos, C., Kastritis, T., and Dimalexis. T. (eds.) 2009. Important Bird Areas of Greece: Priority sites for conservation. Hellenic Ornithological Society. Athens.
Winter long-term trend: no data available

Hungary

Winter population size: Expert opinions Faragó S. (2017): Magyar Vízivad Közlemények No. 29. Soproni Egyetem Kiadó, 304 p. Hungarian Waterfowl Monitoring database National Park Directorates' databases
Winter short-term trend: Expert opinions Faragó S. (2017): Magyar Vízivad Közlemények No. 29. Soproni Egyetemi Kiadó, 304 p. Hungarian Waterfowl Monitoring database National Park Directorates' databases
Winter long-term trend: Expert opinions Faragó S. (2006): A vonuló vízivad populációk fenntartásának alapjai Magyarországon. Doktori Értekezés. Mellékletek, 305 p. Faragó S. (2017): Magyar Vízivad Közlemények No. 29. Soproni Egyetemi Kiadó, 304 p. Hungarian Waterfowl Monitoring database National Park Directorates' databases

Iceland

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; Rare birds in Iceland, annual report in Bliki.
Winter long-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.

Republic of Ireland

Winter population size: Burke, B., Lewis, L. J., Fitzgerald, N., Frost, T., Austin, G. & Tierney, T. D. (2018) Estimates of waterbird numbers wintering in Ireland, 2011/12 – 2015/16. Irish Birds 11, 1-12
Winter short-term trend: Lewis, L. J., Burke, B., Fitzgerald, N., Tierney, T. D. & Kelly, S. (2019) Irish Wetland Bird Survey: Waterbird Status and Distribution 2009/10-2015/16. Irish Wildlife Manuals, No. 106. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland. Population estimates on which these trends are based, though consistent in terms of data collection and statistical analysis, are likely to be underestimates of the true population numbers due to the relatively poor I-WeBS coverage of some of the areas that this species is distributed over.
Winter long-term trend: Lewis, L. J., Burke, B., Fitzgerald, N., Tierney, T. D. & Kelly, S. (2019) Irish Wetland Bird Survey: Waterbird Status and Distribution 2009/10-2015/16. Irish Wildlife Manuals, No. 106. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland

Italy

Winter population size: ISPRA-IWC Database
Winter short-term trend: ISPRA-IWC Database - Zenatello M., Baccetti N., Borghesi F., 2014. Risultati dei censimenti degli uccelli acquatici svernanti in Italia. Distribuzione, stima e trend delle popolazioni nel 2001-2010. ISPRA, Serie Rapporti, 206/2014, pp: 24-28.
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Latvia

Breeding population size: Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@job.lv
Breeding short-term trend: Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@job.lv
Breeding long-term trend: No data available.
Winter population size: Aunins A., Stipniece A. 2016. [Waterfowl counts at the seacoast. Final report for the year 2016.] (in Latvian). Latvian Ornithological society Stipniece A. 2018. [Waterfowl counts in inland water bodies. Final report for the year 2018.] (in Latvian). Latvian Ornithological society
Winter short-term trend: Stipniece A. 2018. [Waterfowl counts in inland water bodies. Final report for the year 2018.] (in Latvian). Latvian Ornithological society
Winter long-term trend: Stipniece A. 2018. [Waterfowl counts in inland water bodies. Final report for the year 2018.] (in Latvian). Latvian Ornithological society

Bucephala clangula (Common Goldeneye)

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.
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Winter population size: L. Šniukšta & E. Pakštytė. 2013. Results of the midwinter waterfowl counts in Lithuania, 2013. Paukščiai 1(17). Pages 23-29 (In Lithuanian with english summary. Direct link: http://www.birdlife.lt/c/document_library/get_file?uuid=ebaafc06-5983-4331-a691-77b0c1e72553&groupId=10136) 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. Castren K. 2014. Birds of the Curonian Spit. Vilnius: Petro Ofsetas.
Winter short-term trend: Laimonas Šniukšta (lsniuksta@gmail.com) 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. Castren K. 2014. Birds of the Curonian Spit. Vilnius: Petro Ofsetas.
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Luxembourg

Winter population size: Biver, G. (2013): Waterbird count - recensement hivernal des oiseaux d'eau 2009-2012. Regulis Wissenschaftliche Berichte, 28: 43-58. Lorgé P., E. Melchior (2016): Die Vögel Luxemburgs. Natur&mwelt Luxembourg. ISBN: 978-2-919920-01-3; Ornitho.lu (2018): online database natur&mwelt asbl & Dachverband Deutscher Avifaunisten (DDA) e.V.; Luxembourg Recorder (2018): database Musée national d'histoire naturelle; Luxembourg
Winter short-term trend: Biver, G. (2013): Waterbird count - recensement hivernal des oiseaux d'eau 2009-2012. Regulis Wissenschaftliche Berichte, 28: 43-58. Lorgé P., E. Melchior (2016): Die Vögel Luxemburgs. Natur&mwelt Luxembourg. ISBN: 978-2-919920-01-3; Ornitho.lu (2018): online database natur&mwelt asbl & Dachverband Deutscher Avifaunisten (DDA) e.V.; Luxembourg Recorder (2018): database Musée national d'histoire naturelle; Luxembourg
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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)

Montenegro

Winter population size: IWC reports (2013-2018): Dubak, Vešović, N., Jovičević, M., Vizi O., Vizi, A.

Netherlands

Breeding population size: Sovon Bird atlas (Sovon 2018)
Breeding short-term trend: NEM (Sovon, RWS, CBS, provinces)
Breeding long-term trend: Sovon
Winter population size: NEM waterbird monitoring scheme (Sovon, RWS, CBS, provinces)
Winter short-term trend: NEM waterbird monitoring scheme (Sovon, RWS, CBS, provinces)
Winter long-term trend: NEM waterbird monitoring scheme (Sovon, RWS, CBS, provinces)

Bucephala clangula (Common Goldeneye)

Norway

Breeding population size: Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkfugler. NOF-rapport 2015-2.
Breeding short-term trend: Kvinand <i>Bucephala clangula</i> , unpublished factsheet BirdLife Norway
Breeding long-term trend: Shimmings, P. & Øien, I.J. 2015. Bestandsestimater for norske hekkfugler. NOF Rapport 2-2015. 268 pp.
Winter population size: (a) Kvinand <i>Bucephala clangula</i> , unpublished actsheet BirdLife Norway (b) Svorkmo-Lundberg, T., Bakken, V., Helberg, M., Mørk, K., Røer, J.E. & Sæbø, S. 2006. Norsk VinterfuglAtlas. Fuglenes utbredelse, bestandsstørrelse og økologi vinterstid. Norsk Ornitologisk Forening, Trondheim. 496 pp.
Winter short-term trend: (a) Kvinand <i>Bucephala clangula</i> , unpublished actsheet BirdLife Norway (b) Svorkmo-Lundberg, T., Bakken, V., Helberg, M., Mørk, K., Røer, J.E. & Sæbø, S. 2006. Norsk VinterfuglAtlas. Fuglenes utbredelse, bestandsstørrelse og økologi vinterstid. Norsk Ornitologisk Forening, Trondheim. 496 pp.

Poland

Breeding population size: Chodkiewicz T., Kuczyński L., Sikora A., Chylarecki P., Neubauer G., Ławicki L., Stawarczyk T. 2015. Ocena liczebności populacji ptaków lęgowych w Polsce w latach 2008–2012. Ornis Polonica 56: 149-189; expert assessment
Breeding short-term trend: Chief Inspectorate of Environmental Protection & Polish Society for the Protection of Birds (OTOP) / BirdLife Poland
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
Winter population size: State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MZPW – Wintering Waterbird Survey & MZPM – Wintering Seabirds Survey)
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

Breeding population size: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) Database
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
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: Mischenko 2014; 2017; Baranovsky in press
Winter population size: Grishanov in press
Winter short-term trend: Grishanov in press
Winter long-term trend: Grishanov & Romanov 2007; Grishanov in press

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

Slovakia

Winter population size: Coordinatory group for reporting 2019. Slabeyová K., Ridzoň J., Karaska D., Topercer J. & Darolová A. 2011: Správa zo zimného sčítania vodného vtáctva na Slovensku 2009/10, SOS/BirdLife Slovensko, Bratislava, 160 s. Karaska D., Trnka A., Krištín A., Ridzoň J.: Chránené vtáčie územia Slovenska. ŠOP SR Banská Bystrica, 2015.
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Winter long-term trend: Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Slabeyová K., Ridzoň J., Karaska D., Topercer J. & Darolová A. 2011: Správa zo zimného sčítania vodného vtáctva na Slovensku 2009/10, SOS/BirdLife Slovensko, Bratislava, 160 s.

Slovenia

Winter population size: Božič L. (2013): Rezultati januarskega štetja vodnih ptic leta 2013 v Sloveniji. – <i>Acrocephalus</i> 34 (156/157): 93–103. Božič L. (2014): Rezultati januarskega štetja vodnih ptic leta 2014 v Sloveniji. – <i>Acrocephalus</i> 35 (160/161): 73–83. Božič L. (2015): Rezultati januarskega štetja vodnih ptic leta 2015 v Sloveniji. – <i>Acrocephalus</i> 36 (164/165): 57–67. Božič L. (2016): Rezultati januarskega štetja vodnih ptic leta 2016 v Sloveniji. – <i>Acrocephalus</i> 37 (170/171): 209–219. Božič L. (2017): Rezultati januarskega štetja vodnih ptic leta 2017 v Sloveniji. – <i>Acrocephalus</i> 38 (174/175): 203–215. Božič L. (2018): Rezultati januarskega štetja vodnih ptic leta 2018 v Sloveniji. – <i>Acrocephalus</i> 39 (178/179): xx–xx.

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Winter short-term trend: Božič L. (2007): Rezultati januarskega štetja vodnih ptic leta 2007 v Sloveniji. – *Acrocephalus* 28 (132): 23–31. Božič L. (2008a): Rezultati januarskega štetja vodnih ptic leta 2008 v Sloveniji. – *Acrocephalus* 29 (136): 39–49. Božič L. (2008b): Rezultati januarskega štetja vodnih ptic leta 2009 v Sloveniji. – *Acrocephalus* 29 (138/139): 169–179. Božič L. (2010): Rezultati januarskega štetja vodnih ptic leta 2010 v Sloveniji. – *Acrocephalus* 31 (145/146): 131–141. Božič L. (2011): Rezultati januarskega štetja vodnih ptic leta 2011 v Sloveniji. – *Acrocephalus* 32 (148/149): 67–77. Božič L. (2012): Rezultati januarskega štetja vodnih ptic leta 2012 v Sloveniji. – *Acrocephalus* 33 (152/153): 109–119. Božič, L. (2008): Monitoring populacij izbranih vrst ptic – Zimsko štetje vodnih ptic 2002–2008. Končno poročilo. – DOPPS, Maribor. Rubinič, B. & Božič, L. (2009): Monitoring populacij izbranih vrst ptic. Rezultati zimskega štetja vodnih ptic 2009, rezultati popisov preleta ujed v jesenski sezoni 2008. 2. vmesno poročilo. – DOPPS, Ljubljana. Božič, L. (2010): Monitoring populacij izbranih ciljnih vrst ptic – Zimsko štetje vodnih ptic. Poročilo. – DOPPS, Ljubljana. Božič, L. (2011): Monitoring populacij izbranih ciljnih vrst ptic – Zimsko štetje vodnih ptic. Poročilo. – DOPPS, Ljubljana.

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Winter short-term trend: Strebel, N. (2019): Überwinternde Wasservogel 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 Database 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: Atlas work, non-published data

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Breeding population size: RBBP; Holling, M. & the Rare Breeding Birds Panel. 2012. Rare breeding birds in the United Kingdom in 2010. *British Birds* 105: 352-416.

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.

Breeding long-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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