

***Mergellus albellus* (Smew)**

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.

Mergellus albellus (Smew)

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	
Belarus	15–30	<1	2010-2018	partial	0	-10 to 10	2012-2019	expert	?		1980-2019	deficient	
Finland	2000–5500	26	2013-2018	complete	0		2007-2018	expert	+	65 to 315	1986-2018	complete	
Norway	35–70	<1	2013-2018	partial	+	0 to 5	2013-2018	complete	+	75 to 550	1980-2018	partial	
Romania	1–5	<1	2013-2018	expert	0		2007-2018	expert	?		1980-2018	deficient	
Russia	8000–10000	66	2008-2018	partial	+	0	2008-2018	expert	?		1980-2018	expert	
Sweden	800–1400	8	2013-2018	partial	-	-50 to -10	2007-2018	expert	?		1980-2018	deficient	
EU28	2800–7000	34											
Europe	10800–17000	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.

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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	
Albania	2–7	<1	2007-2018	complete	-	-92 to -80	2007-2018	complete	-	-91 to 0	1980-2018	complete	
Armenia	50–300	<1	2013-2018	partial	F		2007-2018		?		2003-2018	deficient	
Austria	15–60	<1	2013-2018	complete	-		2007-2018	complete	-		1981-2018	complete	
Azerbaijan	200–1000	<1	1996-2019	complete	0		2010-2019	complete	?		1980-2019	expert	
Belarus	50–100	<1	2013-2018	partial	0	-10 to 10	2000-2012	partial	?				
Belgium	90–150	<1	2013-2018	complete	?	-59 to 8	2007-2018	complete	?	-55 to 9	1992-2018	complete	
Bosnia & HG	10	<1	2015-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Bulgaria	50–450	<1	2013-2018	complete	F		2000-2018	complete	F		1980-2018	complete	
Croatia	50–100	<1	2014-2014	expert	?		2007-2018	deficient	?		1980-2013	deficient	
Czechia	60–140	<1	2015-2019	complete	?		2008-2019	complete	+		1980-2019	complete	
Denmark	8100–8200	10	2016-2016	complete	+		2008-2016	complete	+		1980-2017	complete	
Estonia	1000–3000	2	2013-2017	complete	+		2006-2017	complete	+	20 to 50	1980-2017	complete	
Finland	460–1300	1	2014-2018	complete	+	118 to 322	2007-2018	complete	+	1940 to 2667355	1980-2018	complete	
France	170–260	<1	2013-2018	complete	+	71 to 237	2007-2017	complete	0	-21 to 13	1980-2017	complete	
Georgia	18–29	<1	2014-2019	expert	?				-			partial	
Germany	6500	8	2011-2016	complete	-	-49 to -40	2003-2016	complete	+	68 to 93	1980-2016	complete	
Greece	10–150	<1	2013-2018	partial	0		2007-2018	partial	-		1980-2018	partial	
Hungary	500–1000	<1	2015-2018	partial	-	-68 to 0	2007-2018	complete	-	-82 to -29	1996-2018	complete	
Rep. Ireland	3	<1	2011-2016	deficient	?		2004-2016	deficient	?		1987-2016	deficient	
Italy	2–4	<1	2013-2015	partial	?		2007-2018	deficient	?		1991-2015	deficient	
Kosovo		<1	2019		?				?				
Latvia	150–180	<1	2016-2018	complete	+	11 to 306	2009-2018	complete	+	106 to 402	1991-2018	complete	
Lithuania	60–660	<1	2013-2018	complete	F		2013-2018	partial	F		1980-2018	partial	
Luxembourg	10–20	<1	2013-2018	complete	-	-50 to -20	2007-2018	complete	+	10 to 20	1980-2018	expert	
North Macedonia	10–50	<1	2013-2018	complete	+	50 to 500	2010-2019	complete	+	0 to 900	1988-2018	complete	
Moldova	10–60	<1	2018-2019	partial	F		2007-2018	partial	0		1990-2018	expert	
Montenegro	2–10	<1	2013-2018	expert	0		2007-2018	expert	?				
Netherlands	2400–3800	4	2013-2017	complete	0	-34 to 31	2006-2017	complete	0	-64 to 0	1981-2017	complete	
Norway	200–300	<1	2013-2018	partial	?		2013-2018	deficient	?		1980-2018	deficient	
Poland	1600–5000	4	2013-2018	complete	0	-33 to 4	2011-2018	complete	?		1980-2018	deficient	
Romania	410–5600	2	2013-2018	partial	?	-7 to 2	2013-2018	complete	0	-5 to 1	2000-2018	complete	

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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	15000–102000	47	2017-2018	complete	F		2017-2018	complete	?		1980-2018	deficient	
Serbia	1000–3500	2	2013-2018	complete	+	50 to 79	2013-2018	complete	-	-29 to -10	1980-2018	partial	
Slovakia	100–500	<1	2013-2018	partial	0		2007-2018	partial	0		1980-2018	partial	
Slovenia	37–70	<1	2013-2018	complete	0		2007-2018	complete	0	0	1980-2018	expert	
Sweden	7000–13000	12	2013-2018	complete	+	49 to 143	2007-2018	complete	+	1208 to 1829	1980-2018	complete	
Switzerland	2–11	<1	2015-2019	complete	0	-32 to 36	2008-2019	complete	-	-52 to -33	1980-2019	complete	
Turkey	130–4300	<1	2013-2019	complete	?		2008-2019	deficient	?		1980-2019	deficient	
Ukraine	3000–4000	4	2014-2017	partial	0		2007-2018	partial	F		1980-2018	partial	
United Kingdom	120–130	<1	2012-2016	complete	-		2005-2016	complete	+		1980-2016	complete	
EU28	28600–44600	43											
Europe	48700–166000	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.

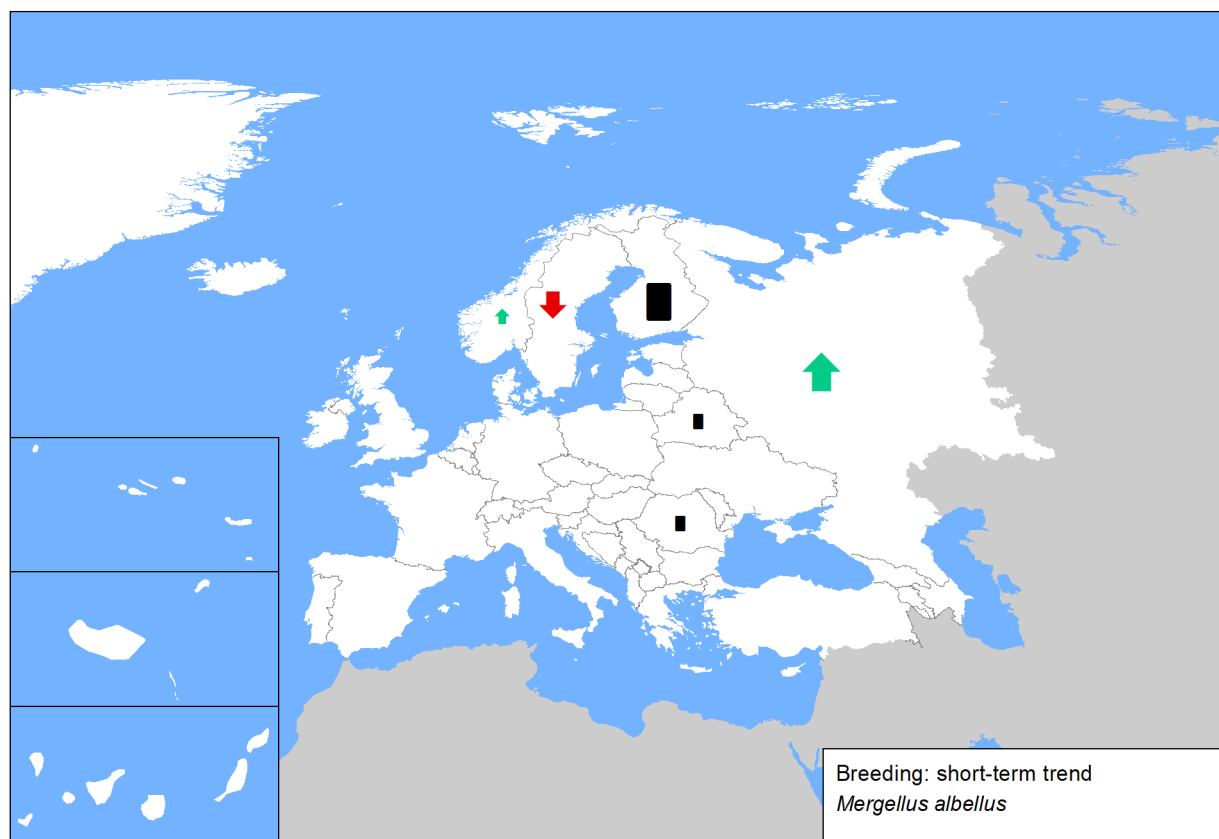


Figure 2. Breeding population sizes and long-term trends across Europe.

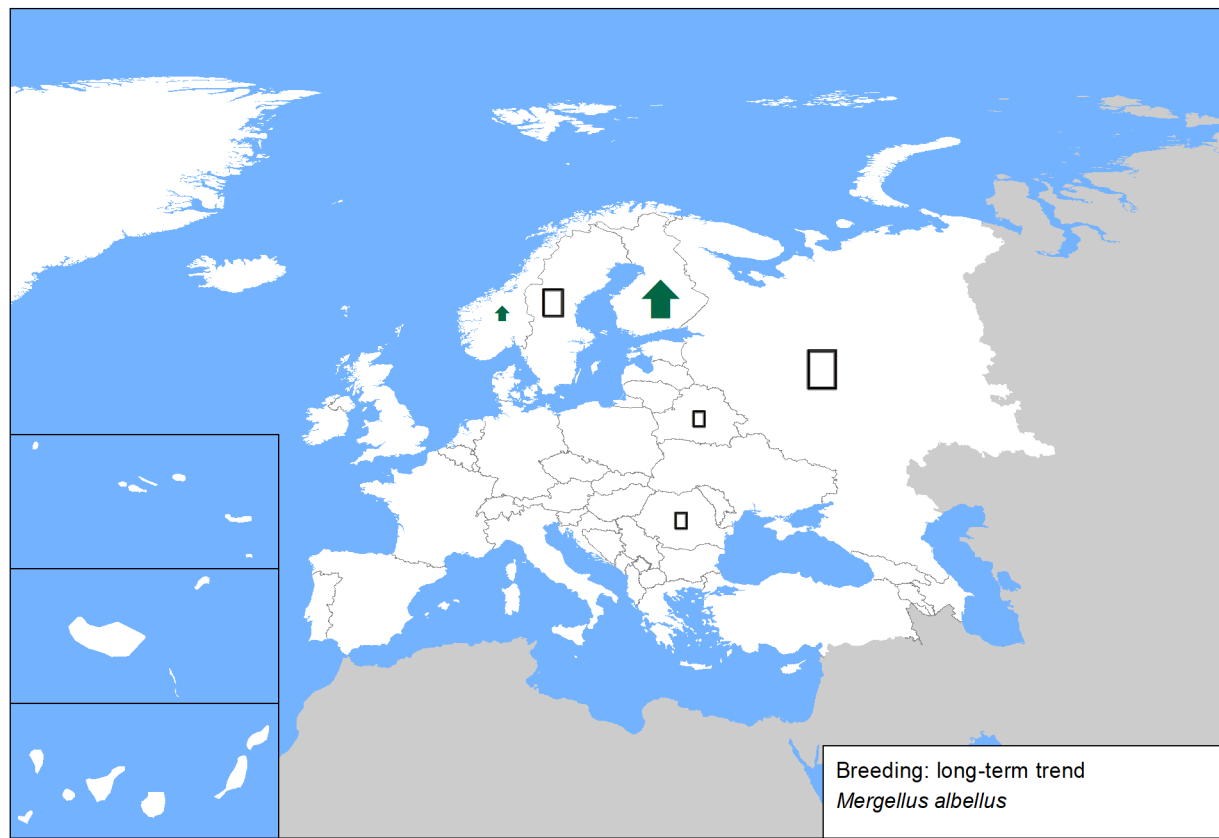


Figure 3. Reported wintering population sizes and short-term trends across Europe. Note that some countries within the species' wintering range did not report any data.

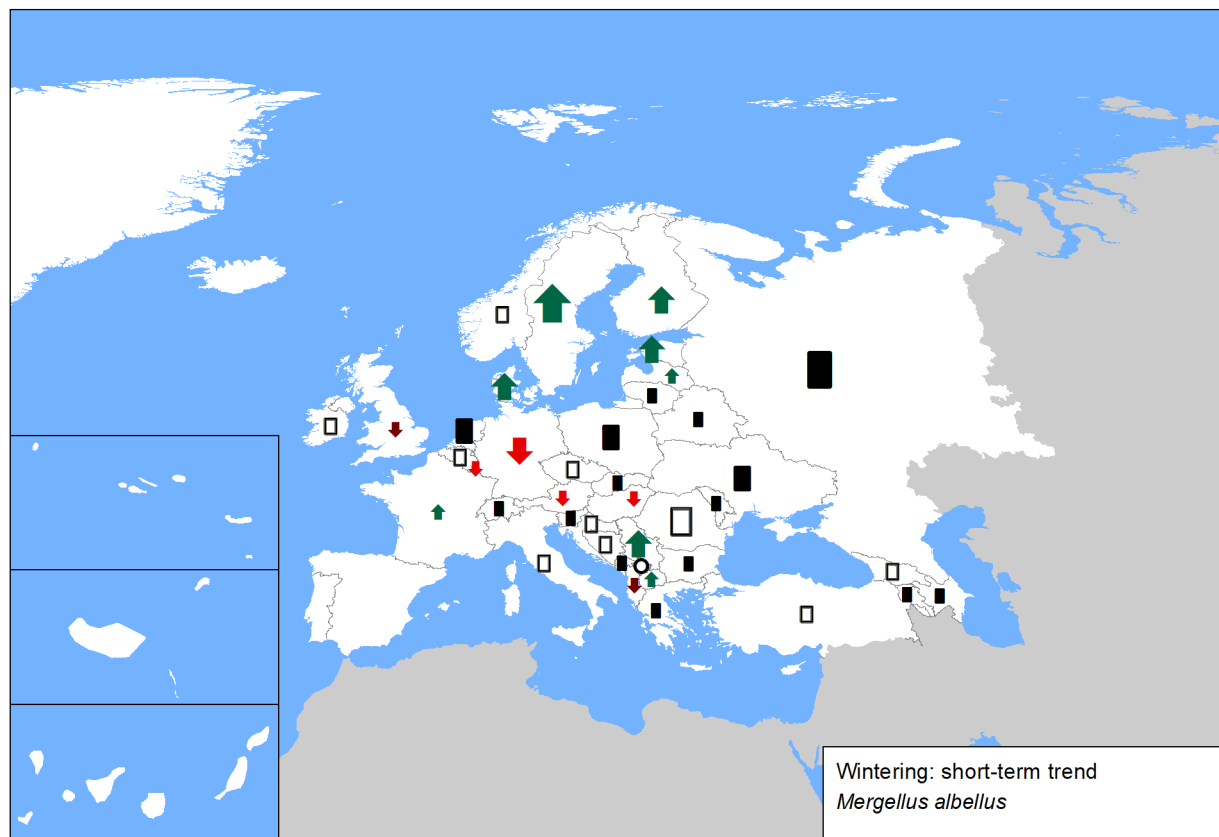
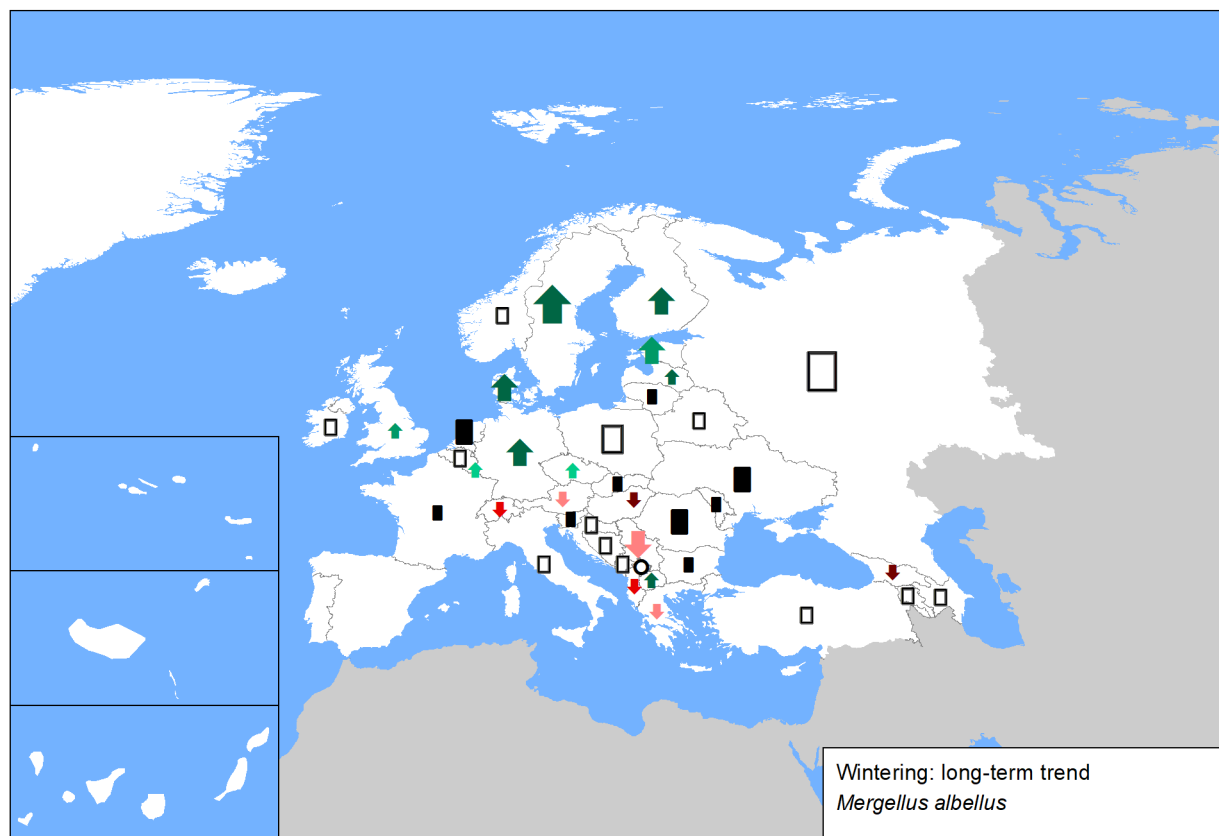


Figure 4. Reported wintering population sizes and long-term trends across Europe. Note that some countries within the species' wintering range did not report any data.



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, unpublished data

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"
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; Michev T., Profirov L. 2003. Mid-Winter Numbers of Waterbirds in Bulgaria (1977-2001). Pensoft, Sofia, 160 pp.; 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: IWC counts in Bulgaria Michev T., Profirov L. 2003. Mid-Winter Numbers of Waterbirds in Bulgaria (1977-2001). Pensoft, Sofia, 160 pp.

Croatia

Winter population size: xxx: 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

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

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: Petersen, I.K., Nielsen, R.D., Pihl, S., Clausen, P., Therkildsen, O., Christensen, T.K., Kahlert, J. & Hounisen, J.P. (2010). Landsdækkende optælling af vandfugle i Danmark, vinteren 2007/2008. Danmarks Miljøundersøgelser, Aarhus Universitet. – Faglig rapport fra DMU, nr. 785. 70 s. Pihl, S., Holm, T.E., Clausen, P., Petersen, I.K., Nielsen, R.D., Laursen, K., Bregnballe, T. & Søgaard, B. (2015). Fugle 2012-2013. NOVANA. Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi, 170 s. Holm, T. E., Clausen, P., Nielsen, R. D., Bregnballe, T., Petersen, I. K., Mikkelsen, P., Bladt, J. (2018). Fugle 2016. NOVANA. Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi, 2018. 142 s. 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/>

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Estonia

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

Mergellus albellus (Smew)

Finland

Breeding population size: Lehtikainen, A., Below, 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: Laaksonen, T., Lehtikainen, A., Pöysä, H., Sirkkiä, P. & Ikonen, K. 2019: Sisävesien vesilintujen kannanvaihtelut 1986-2018. – Linnut-vuosikirja 2018:46-55.
Breeding long-term trend: Laaksonen, T., Lehtikainen, A., Pöysä, H., Sirkkiä, P. & Ikonen, K. 2019: Sisävesien vesilintujen kannanvaihtelut 1986-2018. – Linnut-vuosikirja 2018:46-55.
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

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: www.observation.org
Winter long-term trend: BirdLife international; Zurab Gurgendize Zurab.Gurgendize@Sabuko.ge; observation.org

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

Winter population size: 1) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Papazoglou, C. & Barov, B. 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., Θωμάϊδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Α.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ» Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη. 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., Kastiris, 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., Kastiris, T., and Dimalexis. T. (eds.) 2009. Important Bird Areas of Greece: Priority sites for conservation. Hellenic Ornithological Society. Athens.
Winter long-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) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Papazoglou, C. & Barov, B. 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. 3) 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., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ» Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη. 4) Handrinos, G., & Akriotis T., (1997) The birds of Greece. C. Helm, A & Black, London.

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 Egyetem 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 alapjaib 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

Republic of Ireland

Winter population size: The population estimate was derived by averaging peak annual winter counts for this species over a five year period. This species is a relatively scarce winter visitor to Ireland (recorded at 6 sites during the 2011/12-2015/16 winter period) and is likely to be underrecorded. See: 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.

Mergellus albellus (Smew)

Republic of Ireland

Winter short-term trend: Given the scarcity of this species in winter, and the fact that their preference for offshore areas means they are not accurately counted during I-WeBS core counts, meaningful population trends cannot be derived. See: 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.
Winter long-term trend: Given the scarcity of this species in winter, and the fact that their preference for offshore areas means they are not accurately counted during I-WeBS core counts, meaningful population trends cannot be derived. See: 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.
Winter long-term trend: ISPRA-IWC Database; Baccetti N, Dall'Antonia P, Magagnoli P, Melega L, Serra L, Soldatini C, Zenatello M 2002. Risultati dei censimenti degli uccelli acquatici svernanti in Italia: distribuzione, stima e trend delle popolazioni nel 1991-2000. Biol. Cons. Fauna 111: 19-20.

Kosovo

Latvia

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

Lithuania

Winter population size: Castren K. 2014. Birds of the Curonian Spit. Vilnius: Petro Ofsetas. 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.
Winter short-term trend: Castren K. 2014. Birds of the Curonian Spit. Vilnius: Petro Ofsetas. 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.
Winter long-term trend: Logminas, V. (ed.). 1991. Lietuvos fauna: paukščiai. Vilnius: „Mokslas“. Švažas S., Meissner W., Serebryakov V., Kozulin A, Grishanov G. 2001. Changes of wintering sites of waterfowl in Central and Eastern Europe. Vilnius: OMPO Special Publication. OMPO Vilnius. 2002. Migratory Birds of the Western Palearctic. Vilnius: MOS. Švažas S., Vilksne J., Kuresoo A., Kozulin A. 2003. The Garganey and Shoveler in the Baltic States and Belarus. Vilnius: OMPO Special Publications. Raudonikis L. 2004. Important Bird Areas of the European Union Importance in Lithuania. Lithuanian Ornithological Society & Institute of Ecology of Vilnius University. Lutute, Vilnius. Vilksne J., Švažas S., Czajkowski A., Janaus M., Mischenko A., Kozulin A., Kuresoo A., Serebryakov V. 2010. Atlas of Duck Populations in Eastern Europe. Vilnius: „Akstis“. Nordic Council of Ministers. 2011. Waterbird Populations and Pressures in the Baltic Sea. Copenhagen: Rosendahl Bogtrykkeri AS. 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. Castren K. 2014. Birds of the Curonian Spit. Vilnius: Petro Ofsetas.

Luxembourg

Winter population size: Biver, G. (2013): Waterbird count - recensement hivernal des oiseaux d'eau 2009-2012. Regul. 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. Regul. 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
Winter long-term trend: Micevski, B. (1991). Faunistical analysis and structure of Dojran Lake winter ornithofauna. God. zb., Biol. 43-44: 65-73; Micevski, B. (1999). Winter census of the waterfowl on the Macedonian part of Ohrid Lake in January 1998 (with structural, dietary and evaluation analyses). In: Special issues of Macedonian Ecological Society. pp. 313-323. MES.; Micevski, B. (1992). Structural and faunistical characteristics of the Prespa Lake winter ornithofauna. God. zb., Biol. 45: 51-55; Micevski, B., Schneider, M. (1997). Winter census of waterfowl in Macedonian part of Prespa Lake in January 1997 (with structural, dietary and evaluation analyses). In: Towards Integrated Conservation and Sustainable Development of Transboundary Macro and Micro Prespa Lakes pp. 160-164. Towards Integrated Conservation and Sustainable Development of Transboundary Macro and Micro Prespa Lakes. Preservation and Protection of Natural Environment in Albania, Korcha, Albania.; Micevski, B. (1996). Ohrid Lake winter ornithofauna (Faunistical and Structural Characteristics). God. Zb., Biol. 49: 85-93; Fremuth, W., Bino, T., Bego, F., Jorgo, G., Micevski, B., Anastasovski, V., Tzvetkov, T., Hristov, I., Schneider-Jacoby, M., Shumka, S. (2000). Four years of simultaneous wintering waterbird census at the Ohrid and Prespa Lakes 1997-2000. In: Grupche, Lj. & Kungulovski, Gj. (eds.). Proceedings of the International Symposium 'Sustainable development of Prespa Region' pp. 28-38. Macedonian Ecological Society; Catsadorakis, G., Aleksi, P., Avramoski, O., Bino, T., Bojadzi, A., Brajanoski, Z., Fremuth, W., Kazoglou, Y., Koutseri, I., Logotheti, A., Malakou, M., Nikolaou, H., Nikolaou, L., Putilin, K., Shumka, S., Uzunova, D., Veleviski, M. (2013). Waterbirds wintering at the Prespa lakes as revealed by simultaneous counts in the three adjoining littoral states. Macedonian Journal of Ecology and Environment 15(1): 23-31; unpublished IWC data of the Macedonian Ecological Society

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)

Mergellus albellus (Smew)

Montenegro

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

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)

Norway

Breeding population size: Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2.
Breeding short-term trend: (a) Lappfiskand <i>Mergellus albellus</i> , unpublished factsheet BirdLife Norway, (b) Jan Eivind Østnes pers. comm.)
Breeding long-term trend: (a) Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2. (b) Jan Eivind Østnes pers. comm.
Winter population size: Artsobservasjoner www.artsobservasjoner.no
Winter short-term trend: Artsobservasjoner www.artsobservasjoner.no

Poland

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: Gilyazov 2012
Breeding long-term trend: Krivenko & Vinogradov 2008
Winter population size: Bukreev & Dzhmirzoev 2017; Bukreev et al. 2018
Winter short-term trend: Bukreev & Dzhmirzoev 2017; Bukreev et al. 2018

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.
Winter short-term trend: Coordinatory group for reporting 2019, AVES-Symphony 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.
Winter long-term trend: Coordinatory group for reporting 2019, AVES-Symphony 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.

Mergellus albellus (Smew)

Slovenia

Winter short-term trend: Božič L. (2007): Rezultati januarskega štetja vodnih ptic leta 2007 v Sloveniji. – <i>Acrocephalus</i> 28 (132): 23–31. Božič L. (2008a): Rezultati januarskega štetja vodnih ptic leta 2008 v Sloveniji. – <i>Acrocephalus</i> 29 (136): 39–49. Božič L. (2008b): Rezultati januarskega štetja vodnih ptic leta 2009 v Sloveniji. – <i>Acrocephalus</i> 29 (138/139): 169–179. Božič L. (2010): Rezultati januarskega štetja vodnih ptic leta 2010 v Sloveniji. – <i>Acrocephalus</i> 31 (145/146): 131–141. Božič L. (2011): Rezultati januarskega štetja vodnih ptic leta 2011 v Sloveniji. – <i>Acrocephalus</i> 32 (148/149): 67–77. Božič L. (2012): Rezultati januarskega štetja vodnih ptic leta 2012 v Sloveniji. – <i>Acrocephalus</i> 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.
Winter long-term trend: Birdlife International (2004): Birds in Europe: population estimates, trends and conservation status. BirdLife Conservation Series No. 12. – Birdlife International, Cambridge. Sovinc, A. (1994): Zimski ornitološki atlas Slovenije. – Tehniška založba Slovenije, Ljubljana.

Sweden

Breeding population size: Ottosson, U., Ottvall, R., Elmqvist, 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
Winter population size: Nilsson, L. & Haas, F. 2016. Distribution and numbers of wintering waterbirds in Sweden in 2015 and changes during the last fifty years. Ornis Svecica 26: 3-60. Haas, F. & Nilsson, L. 2018. International counts of staging and wintering waterbirds and geese in Sweden. Annual report for 2017/2018. Lund University.
Winter short-term trend: Nilsson, L. & Haas, F. 2016. Distribution and numbers of wintering waterbirds in Sweden in 2015 and changes during the last fifty years. Ornis Svecica 26: 3-60.
Winter long-term trend: Nilsson, L. & Haas, F. 2016. Distribution and numbers of wintering waterbirds in Sweden in 2015 and changes during the last fifty years. Ornis Svecica 26: 3-60. Haas, F. & Nilsson, L. 2018. International counts of staging and wintering waterbirds and geese in Sweden. Annual report for 2017/2018. Lund University.

Switzerland

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

Ukraine

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