THE IUCN RED LIST OF THREATENED SPECIES™

Microcarbo pygmaeus (Pygmy Cormorant)

European Red List of Birds

Supplementary Material

The European Union (EU28) Red List assessments were based principally on the official data reported by EU Member States to the European Commission under Article 12 of the Birds Directive in 2019-20. For the European Red List assessments, similar data were sourced from BirdLife Partners and other collaborating experts in other European countries and territories. For more information, see BirdLife International (2021).

Contents

Recommended citation

BirdLife International (2021) European Red List of Birds. Luxembourg: Publications Office of the European Union.

Further information

http://datazone.birdlife.org/info/euroredlist
http://www.birdlife.org/europe-and-central-asia/european-red-list-birds-0
http://www.iucnredlist.org/regions/europe
http://ec.europa.eu/environment/nature/conservation/species/redlist/

Data requests and feedback

To request access to these data in electronic format, provide new information, correct any errors or provide feedback, please email science@birdlife.org.

Microcarbo pygmaeus (Pygmy Cormorant)

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

Country (or territory)[2]	Population estimate				Short-term population trend[5]				Long-term population trend[5]				Subspecific population (where relevant)
	Size (pairs)[3]	Europe (%)	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	
Albania	200–250	<1	2007-2018	complete	+	0 to 900	2007-2018	complete	+	100 to 900	1980-2018	expert	
Armenia	2200–2700	5	2013-2018	complete	0		2007-2018		0		2003-2018	partial	
Austria	120–360	<1	2013-2017	complete	+		2007-2018	complete	+	1000 to 2700	1981-2018	complete	
Azerbaijan	10000–15000	25	1996-2019	complete	0		2013-2019	expert	0		1980-2019	partial	
Bosnia & HG	700–1000	2	2015-2018	complete	+	5 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	340–900	1	2013-2018	partial	+	3 to 5	2000-2018	partial	+	5 to 10	1980-2018	partial	
Croatia	18–70	<1	2013-2018	complete	+		2007-2018	complete	+	50 to 100	1980-2018	expert	
Georgia	present	<1		deficient	?			deficient	?				
Greece	3000–3100	6	2015	partial	+		2007-2018	partial	+		1980-2018	partial	
Hungary	1100–1300	2	2015-2017	complete	+	116 to 185	2007-2018	complete	+		1995-2018	complete	
Italy	2100–2200	4	2013	expert	+	40 to 115	2006-2018	expert	+		1994-2018	expert	
North Macedonia	50–100	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Moldova	50–160	<1	2014-2017	partial	+		2007-2018	partial	0		1990-2018	expert	
Montenegro	2900–4000	7	2013-2018	partial	+		2007-2018	expert	?				
Romania	9400–10500	21	2013-2018	expert	?		2007-2018	deficient	+	1 to 20	1980-2018	expert	
Russia	5000–7000	12	2008-2018	partial	?		2008-2018	deficient	+	1	1980-2018	partial	
Serbia	1000–1600	3	2013-2018	complete	+	10 to 29	2007-2018	complete	+	80 to 100	1980-2018	complete	
Turkey	2000–3000	5	2002-2012	expert	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	2000–2500	5	2015-2018	partial	+	10 to 30	2007-2018	partial	+	20 to 50	1980-2018	partial	
EU28	16100–18300	35											
Europe	**42300–55500**	**100**											

[1] See 'Sources' at end of factsheet, and for more details on individual EU Member State reports, see the Article 12 reporting portal at http://bd.eionet.europa.eu/article12/report.
[2] The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.
[3] In the few cases where population size estimates were reported in units other than those specified, they were converted to the correct units using standard correction factors.
[4] The 'method used' (replacing the data 'quality' assessment in the 2015 European Red List) is reported as: a) Complete: complete survey or a statistically robust estimate; b) Partial: based mainly on extrapolation from a limited amount of data; c) Expert: based mainly on expert opinion with very limited data; d) Defficient: insufficient or no data available.
[5] The robustness of regional trends to the effects of any missing or incomplete data was tested using plausible scenarios, based on other sources of information, including any other reported information, recent national Red Lists, scientific literature, other publications and consultation with relevant experts.
[6] Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).
[7] Trend magnitudes are rounded to the nearest integer.

Table 2. Reported national wintering population sizes and trends in Europe[1]. Note that some countries within the species' wintering range did not report any data, and that only minimum totals are presented, to avoid double-counting of birds moving between countries.

Country (or territory)[2]	Population estimate				Short-term population trend[5]				Long-term population trend[5]				Subspecific population (where relevant)
	Size (individuals)[3]	Europe (%)	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	Direction[6]	Magnitude (%)[7]	Year(s)	Method[4]	
Albania	220–8000	4	2007-2018	complete	+	-63 to 341	2007-2018	complete	0	0	1980-2018	complete	
Armenia	4000–6000	6	2013-2018	partial	0		2007-2018		?		2003-2018	deficient	
Azerbaijan	10000–20000	18	1996-2019	complete	0		2010-2019	complete	?		1980-2019	expert	
Bosnia & HG	300–1000	<1	2015-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Bulgaria	2000–12000	6	2013-2018	partial	F		2001-2018	partial	+	10 to 20	1980-2018	partial	
Croatia	700–3500	2	2013-2018	expert	+	70 to 100	2002-2010	expert	?		1980-2018	deficient	
Georgia	2000–3200	3	2017-2018	partial	?				?				
Greece	3500–7500	6	2015	partial	+		2007-2018	partial	+		1980-2018	partial	
Hungary	500–1300	1	2013-2018	complete	F		2007-2018	complete	+		2001-2018	complete	
Italy	9200–12400	14	2013-2015	partial	-	-30 to 0	2009-2015	partial	+	16725 to 22410	2000-2015	partial	
North Macedonia	500–3500	2	2013-2018	complete	+	0 to 100	2010-2019	complete	0		1988-2018	complete	
Moldova	0	<1	2018-2019	expert	?		2007-2018	partial	?		1990-2018	deficient	
Montenegro	11000	14	2013-2018	expert	0		2007-2018	expert	?				
Romania	950–20100	6	2013-2018	partial	-	-11 to -2	2013-2018	complete	0	-4 to 4	2000-2018	complete	
Serbia	4000–10000	8	2013-2018	complete	F		2013-2018	complete	+	80 to 100	1980-2018	complete	
Slovakia	150–450	<1	2013-2018	complete	0		2007-2018	complete	+	200 to 5000	1980-2018	complete	
Slovenia	300–1300	<1	2013-2018	complete	+		2006-2018	complete	+		1980-2018	expert	
Turkey	3600–10900	8	2013-2019	complete	?		2008-2019	deficient	?		1980-2019	deficient	
Ukraine	300–1500	<1	2014-2017	partial	0		2007-2018	partial	F		1980-2018	partial	
EU28	16400–38500	30											
Europe	**53300–134000**	**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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[5] The robustness of regional trends to the effects of any missing or incomplete data was tested using plausible scenarios, based on other sources of information, including any other reported information, recent national Red Lists, scientific literature, other publications and consultation with relevant experts.
[6] Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).
[7] Trend magnitudes are rounded to the nearest integer.

Trend maps

A symbol appears in each country where the species occurs: the shape and colour of the symbol represent the population trend in that country, and the size of the symbol corresponds to the proportion of the European population occurring in that country.

KEY

- Large increase (≥50%)
- Moderate increase (20–49%)
- Small increase (<20%)
- Increase of unknown magnitude
- Stable or fluctuating
- Unknown
- Present (no population or trend data)
- Extinct since 1980
- Large decrease (≥50%)
- Moderate decrease (20–49%)
- Small decrease (<20%)
- Decrease of unknown magnitude

Each symbol, with the exception of Present and Extinct, may occur in up to three different size classes, corresponding to the proportion of the European population occurring in that country.

- Large: ≥10% of the European population
- Medium: 1–9% of the European population
- Small: <1% of the European population

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

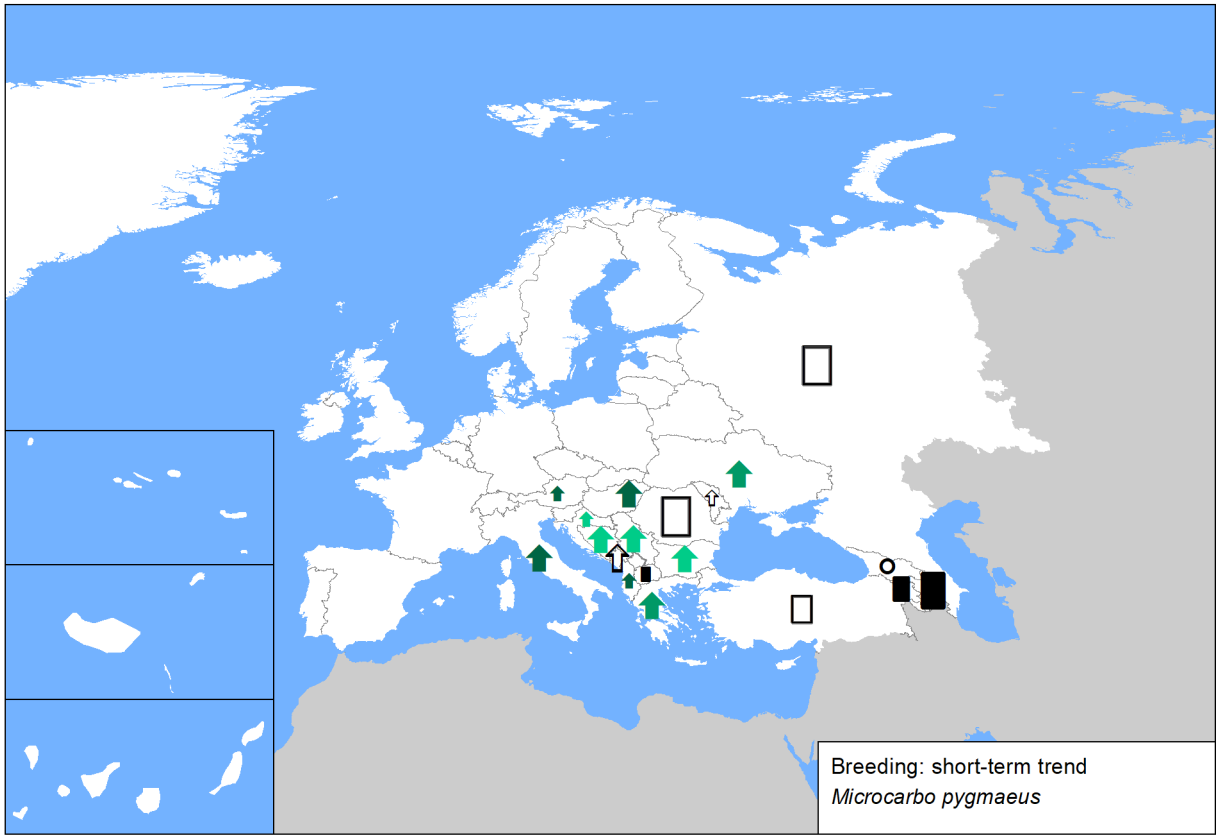


Figure 2. Breeding population sizes and long-term trends across Europe.

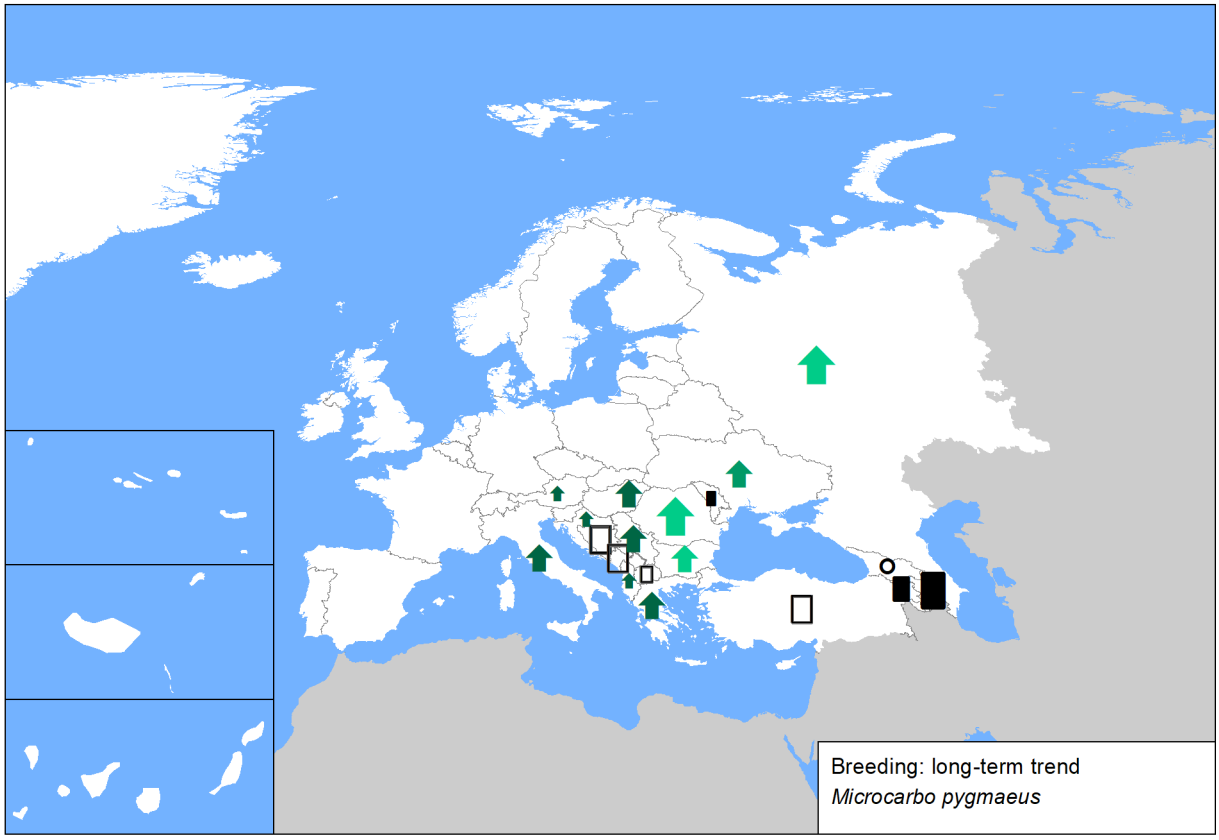


Figure 3. Reported wintering population sizes and short-term trends across Europe. Note that some countries within the species' wintering range did not report any data.

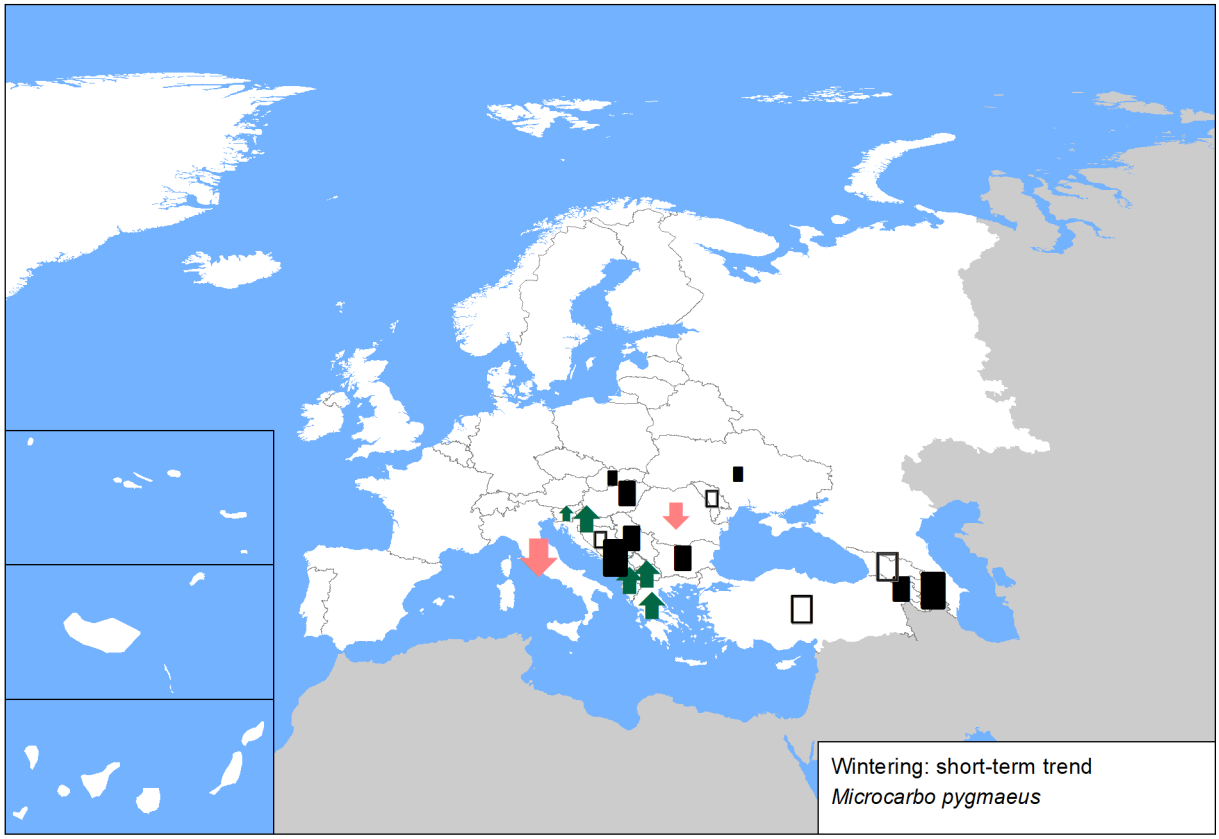
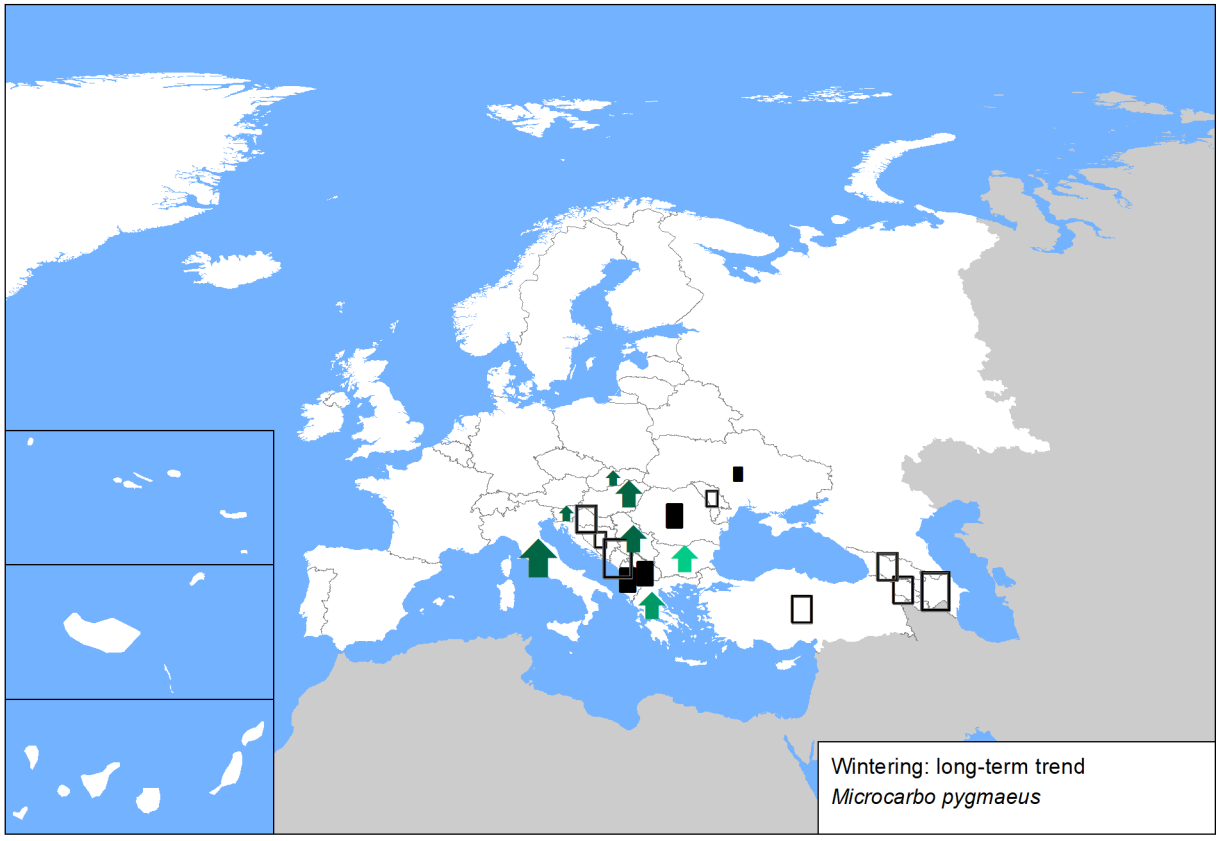


Figure 4. Reported wintering population sizes and long-term trends across Europe. Note that some countries within the species' wintering range did not report any data.



Sources

Albania

Breeding population size: Bino & Xeka 2020 in EBBA 2
Breeding short-term trend: Bino & Xeka pers. obs.
Breeding long-term trend: Bino pers. obs.
Winter population size: Bino pers. obs.
Winter short-term trend: Bino et al. 2018
Winter long-term trend: Bino et al. 2018

Armenia

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

Breeding population size: BirdLife Austria, unpublished data from the bird monitoring programm of the Neusiedler See - Seewinkel national park
Breeding short-term trend: BirdLife Austria, unpublished data from the bird monitoring programm of the Neusiedler See - Seewinkel national park
Breeding long-term trend: New breeding bird, first breeding recorded in 2007

Azerbaijan

Breeding population size: AOS data base
Breeding short-term trend: AOS data base
Breeding long-term trend: AOS Data Base
Winter population size: AOS data base
Winter short-term trend: AOS Data Base
Winter long-term trend: AOS Data Base

Bosnia and Herzegovina

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

Breeding population size: 1. Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p.; National Art. 12 reporting database 2013-2018; 2. Golemansky V. (ed.) 2011. Red data book of the Republic of Bulgaria, Vol. 2 Animals, Bulgarian Academy of Sciences, Ministry of Environment and Waters of Bulgaria. Sofia,2011 3. BSPB Bird Database 4. WWF Green borders LIFE+ Project Reports Expert for contact: Svilen Cheshmedjiev, svilen.cheshmedjiev@bspb.org
Breeding short-term trend: 1. Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p.; National Art. 12 reporting database 2013-2018; 2. Golemansky V. (ed.) 2011. Red data book of the Republic of Bulgaria, Vol. 2 Animals, Bulgarian Academy of Sciences, Ministry of Environment and Waters of Bulgaria. Sofia,2011 3. BSPB Bird Database 4. WWF Green borders LIFE+ Project Reports Expert for contact: Svilen Cheshmedjiev, svilen.cheshmedjiev@bspb.org
Breeding long-term trend: 1. Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p. 2. Golemansky V. (ed.) 2011. Red data book of the Republic of Bulgaria, Vol. 2 Animals, Bulgarian Academy of Sciences, Ministry of Environment and Waters of Bulgaria. Sofia,2011 3. Botev, B. (ed.) 1985. Red Data Book of Bulgaria, Vol. 2, Animals, Sofia, Bas 4. BSPB Bird Database 5. WWF Green borders LIFE+ Project Reports Expert for contact: Svilen Cheshmedjiev, svilen.cheshmedjiev@bspb.org
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: 1. BSPB Bird Database; National Art. 12 reporting database 2013-2018; 2. Golemansky V. (ed.) 2011. Red data book of the Republic of Bulgaria, Vol. 2 Animals, Bulgarian Academy of Sciences, Ministry of Environment and Waters of Bulgaria. Sofia,2011 3. WWF Green borders LIFE+ Project Reports Expert for contact: Svilen Cheshmedjiev, svilen.cheshmedjiev@bspb.org; 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: 1. BSPB Bird Database 2. Golemansky V. (ed.) 2011. Red data book of the Republic of Bulgaria, Vol. 2 Animals, Bulgarian Academy of Sciences, Ministry of Environment and Waters of Bulgaria. Sofia,2011 3. WWF Green borders LIFE+ Project Reports 4. Botev, B. (ed.) 1985. Red Data Book of Bulgaria, Vol. 2, Animals, Sofia 5. Michev T., Profirov L. 2003. Mid-Winter Numbers of Waterbirds in Bulgaria (1977-2001). Pensoft, Sofia, 160 pp. Expert for contact: Svilen Cheshmedjiev, svilen.cheshmedjiev@bspb.org

Croatia

Breeding population size: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.

Breeding short-term trend: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.

Breeding long-term trend: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.

Winter population size: Tutiš, V., Kralj, J., Radović, D., Ćiković, D., Barišić, S. (ur.) (2013): Crvena knjiga ptica Hrvatske. Ministarstvo zaštite okoliša i prirode, Državni zavod za zaštitu prirode, Zagreb, 258 str.

Winter short-term trend: Report on the implementation of AEWA for the period 2009-2011 - Croatia. http://www.unep-aewa.org/en/document/national-report-croatia-3

Winter long-term trend: no data available

Georgia

Breeding population size: BirdLife International 2004

Winter population size: Zurab Gurgenidze Zurab.Gurgenidze@Sabuko.ge; observation.org

Greece

Breeding 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., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη. 3) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife Internationa. ISBN 978-1-912086-00-9 4) Kazantzidis, S. & G. Yfantis. 2012. Heronries in Greece - 2nd national Census. Oionos (Hellenic Ornithological Society' s 3-mothly edition) 49: 8-9.

Breeding short-term trend: 1) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife Internationa. ISBN 978-1-912086-00-9 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) Natura viewer (http://natura2000.eea.europa.eu/#). 4) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη. 5) Kazantzidis, S. & G. Yfantis. 2012. Heronries in Greece - 2nd national Census. Oionos (Hellenic Ornithological Society' s 3-mothly edition) 49: 8-9.

Breeding long-term trend: 1) Handrinos, G., & Akriotis T., (1997) The birds of Greece. C. Helm, A & Black, London. 2) BirdLife International (2004) Birds in Europe : Popilation estimates, trends and conservation status, Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12). 3) 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. 4) Natura viewer (http://natura2000.eea.europa.eu/#). 5) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.

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., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.

Winter short-term trend: 1) BirdLife International (2004) Birds in Europe : Popilation 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) Natura viewer (http://natura2000.eea.europa.eu/#). 4) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.

Winter long-term trend: 1) Handrinos, G., & Akriotis T., (1997) The birds of Greece. C. Helm, A & Black, London. 2) BirdLife International (2004) Birds in Europe : Popilation estimates, trends and conservation status, Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12). 3) 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. 4) Natura viewer (http://natura2000.eea.europa.eu/#). 5) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «"Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.

Hungary

Breeding population size: National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species)

Breeding short-term trend: National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) Szinai P. (szerk.) (2013): Kis kárókatona fajmegőrzési terv. Unpublished.

Microcarbo pygmaeus (Pygmy Cormorant)

Hungary

Breeding long-term trend: Magyar, G., Hadarics, T., Waliczky, Z., Schmidt, A., Nagy, T. & Bankovics, A. (1998): Nomenclator avium Hungariae. Magyarország madarainak névjegyzéke. KTM Természetvédelmi Hivatal Madártani Intézete – Magyar Madártani és Természetvédelmi Egyesület – Winter Fair, Budapest – Szeged. p. 202 MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. P. 278. Szinai P. (szerk.) (2013): Kis kárókatona fajmegőrzési terv. Unpublished.
Winter population size: Magyar Vízivad Közlemények Hungarian Waterfowl Monitoring Database (http://vadgazdalkodas.emk.uni-sopron.hu/content/index/id/3955)
Winter short-term trend: Magyar Vízivad Közlemények Hungarian Waterfowl Monitoring Database (http://vadgazdalkodas.emk.uni-sopron.hu/content/index/id/3955)
Winter long-term trend: Magyar Vízivad Közlemények Hungarian Waterfowl Monitoring Database (http://vadgazdalkodas.emk.uni-sopron.hu/content/index/id/3955)

Italy

Breeding population size: Volponi 2013 , in Brichetti P., Fracasso G., 2018. The Birds of Italy. Vol. I. Anatidae-Alcidae. Ed. Belvedere, Latina (Italy), "historia naturae" (6), pp. 512.
Breeding short-term trend: Volponi 2013 , in Brichetti P., Fracasso G., 2018. The Birds of Italy. Vol. I. Anatidae-Alcidae. Ed. Belvedere, Latina (Italy), "historia naturae" (6), pp. 512.
Breeding long-term trend: Brichetti P., Meschini E., 1993. Stima delle popolazioni di uccelli nidificanti. In Meschini E., Frugis S.,1993. Atlante degli uccelli nidificanti in Italia. Suppl. Ric. Biol. Selvaggina, 20, 1-345.
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 acquativi 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.

North Macedonia

Breeding population size: unpublished data from the European Breeding Bird Atlas 2
Breeding short-term trend: unpublished data from the European Breeding Bird Atlas 2
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 ornitofauna (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., Velevski, 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

Breeding population size: Moldova`s contribution for the second European Breeding Bird Atlas (EBBA2)
Breeding short-term trend: SPPN expert opinion (sppn.moldova@gmail.com)
Breeding long-term trend: SPPN expert opinion (sppn.moldova@gmail.com)
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

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

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: Romanian Common Bird Monitoring Programme, Breeding Waterbird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) 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; Lokhman 2017
Breeding long-term trend: Belik et al. 2003; Rusanov 2014; Lokhman 2017

Serbia

Breeding population size: EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.
Breeding short-term trend: Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.
Breeding long-term trend: EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.
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. Ridzoň, J., Darolová, A. Karaska, D., Fulín, M.
Winter short-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.
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. – Acrocephalus 34 (156/157): 93–103. Božič L. (2014): Rezultati januarskega štetja vodnih ptic leta 2014 v Sloveniji. – Acrocephalus 35 (160/161): 73–83. Božič L. (2015): Rezultati januarskega štetja vodnih ptic leta 2015 v Sloveniji. – Acrocephalus 36 (164/165): 57–67. Božič L. (2016): Rezultati januarskega štetja vodnih ptic leta 2016 v Sloveniji. – Acrocephalus 37 (170/171): 209–219. Božič L. (2017): Rezultati januarskega štetja vodnih ptic leta 2017 v Sloveniji. – Acrocephalus 38 (174/175): 203–215. Božič L. (2018): Rezultati januarskega štetja vodnih ptic leta 2018 v Sloveniji. – Acrocephalus 39 (178/179): xx–xx.
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. Rubinić, 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, Cambrige. Sovinc, A. (1994): Zimski ornitološki atlas Slovenije. – Tehniška založba Slovenije, Ljubljana.

Turkey

Breeding population size: Güven Eken personal communication (2019), Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12) Kusbank Bird Database (Ebird)
Winter population size: Ebird Datebase and Midwinter Fowl Counts (2013-2018), Birdlife Estimate
Winter short-term trend: Midwinter bird counts 2012-2019
Winter long-term trend: Midwinter bird counts 1980-2019 and Historical Records come from OSME and other midwinter counts

Ukraine

Breeding population size: 1. Жмуд М.Є. (2009): Баклан малий. - Червона книга України. Тваринний світ. Київ: Глобалколсантинг. 401. 2. Жмуд М.Є., Яковлєв М.В., Балацький К.Л. (2010): Стан ресурсів водно-болотних птахів на окремих територіях Азово-Чорноморського узбережжя за результатами серпневих обліків. Дунайський біосферний заповідник (дельта Дунаю). - Чисельність та розміщення водно-болотних видів птахів в ключових угіддях Азово-Чорноморського екологічного коридору. Мелітополь. 15-20. 3. Яковлев М.В., Корзюков А.И. (2011): Гибель малых бакланов в январе 2010 г. в Килийском гирле дельты Дуная. - Беркут. 19 (1-2): 195-197. 4. Костин С.Ю. (2015): Баклан малый. - Красная книга Республики Крым. Животные. Симферополь: ООО «ИТ «АРИАЛ». 302. 5. Чайка М.О. (2017): Баклан малий. - Червона книга Донецької області. Тваринний світ. Вінниця: Вінницька обласна друкарня. 275.
Breeding short-term trend: 1. Жмуд М.Є. (2009): Баклан малий. - Червона книга України. Тваринний світ. Київ: Глобалколсантинг. 401. 2. Жмуд М.Є., Яковлєв М.В., Балацький К.Л. (2010): Стан ресурсів водно-болотних птахів на окремих територіях Азово-Чорноморського узбережжя за результатами серпневих обліків. Дунайський біосферний заповідник (дельта Дунаю). - Чисельність та розміщення водно-болотних видів птахів в ключових угіддях Азово-Чорноморського екологічного коридору. Мелітополь. 15-20. 3. Яковлев М.В., Корзюков А.И. (2011): Гибель малых бакланов в январе 2010 г. в Килийском гирле дельты Дуная. - Беркут. 19 (1-2): 195-197. 4. Костин С.Ю. (2015): Баклан малый. - Красная книга Республики Крым. Животные. Симферополь: ООО «ИТ «АРИАЛ». 302. 5. Чайка М.О. (2017): Баклан малий. - Червона книга Донецької області. Тваринний світ. Вінниця: Вінницька обласна друкарня. 275.

Microcarbo pygmaeus (Pygmy Cormorant)

Ukraine

Breeding long-term trend: 1. Hagemaijer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. London. 1997. 903 p. 2. Сиохин В.Д. (2000): Характеристика распределения и численности гнездящихся птиц в ВБУ Азово-Черноморского побережья. - Численность и размещение гнездящихся околоводных птиц в водно-болотных угодьях Азово-Черноморского побережья Украины. Киев: Wetland International. 412-444. 3. Горбань І. (2003): Оцінка чисельності гніздових птахів України. - Вісн. Львів. ун-ту. Сер. біол. 34: 147-158. 4. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12, 2004. 374 p. 5. Жмуд М.Є. (2009): Баклан малий. - Червона книга України. Тваринний світ. Київ: Глобалколсантинг. 401. 6. Жмуд М.Є., Яковлєв М.В., Балацький К.Л. (2010): Стан ресурсів водно-болотних птахів на окремих територіях Азово-Чорноморського узбережжя за результатами серпневих обліків. Дунайський біосферний заповідник (дельта Дунаю). - Чисельність та розміщення водно-болотних видів птахів в ключових угіддях Азово-Чорноморського екологічного коридору. Мелітополь. 15-20. 7. Яковлев М.В., Корзюков А.И. (2011): Гибель малых бакланов в январе 2010 г. в Килийском гирле дельты Дуная. - Беркут. 19 (1-2): 195-197. 8. Костин С.Ю. (2015): Баклан малый. - Красная книга Республики Крым. Животные. Симферополь: ООО «ИТ «АРИАЛ». 302. 9. Чайка М.О. (2017): Баклан малий. - Червона книга Донецької області. Тваринний світ. Вінниця: Вінницька обласна друкарня. 275.

Bibliography

Balmaki, B. and Barati, A. 2006. Harvesting status of migratory waterfowl in northern Iran: a case study from Gilan Province. In: Boere, G., Galbraith, C. and Stroud, D. (eds), Waterbirds around the world, pp. 868-869. The Stationary Office, Edinburgh, UK.

Billerman, S.M., Keeney, B.K., Rodewald, P.G. and Schulenberg, T.S. (eds). 2020. Birds of the World. Cornell Laboratory of Ornithology, Ithaca.

Bird, J. P., Martin, R., Akçakaya, H. R., Gilroy, J., Burfield, I. J., Garnett, S. G., Symes, A., Taylor, J., Sekercioglu, Ç. H. and Butchart, S. H. M. 2020. Generation lengths of the world's birds and their implications for extinction risk. Conservation Biology 34(5): 1252-1261. DOI: 10.1111/cobi.13486.

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

Crivelli, A. J.; Nazirides, T.; Catsadorakis, G.; Hulea, D.; Malakou, M.; Marinov, M.; Shogolev, I. 2000. Status and population development of Pygmy Cormorant Phalacrocorax pygmaeus breeding in the Palearctic. In: Yesou, P.; Sultana, J. (ed.), Monitoring and conservation of birds, mammals and sea turtles in the Mediterranean and Black Seas: Proceedings of the 5th Medmaravis Symposium, Gozo, Malta, 29 September - 3 October 1998, pp. 49-60. Environment Protection Department, Valetta.

Delany, S. and Scott, D. 2006. Waterbird population estimates. Wetlands International, Wageningen, The Netherlands.

Eken, G.; Magnin, G. 1999. A preliminary biodiversity atlas of the Konya Basin, Central Turkey. Dogal Hayat Koruma Dernegi, Istanbul.

Johnsgard, P. A. 1993. Cormorants, darters, and pelicans of the world. Smithsonian Institution Press, Washington.

Kazantzidis, S.; Nazirides, T. 1999. National Action Plan for the Pygmy Cormorant (Phalacrocorax pygmaeus), Pallas 1993. WWF/HOS/Society for the Protection of Prespes, Athens.

Nelson, J. B. 2005. Pelicans, cormorants and their relatives. Pelecanidae, Sulidae, Phalacrocoracidae, Anhingidae, Fregatidae, Phaethontidae. Oxford University Press, Oxford, U.K.

Wetland International - China Office. 2006. Relict Gull surveys in Hongjianao, Shaanxi Province. Newsletter of China Ornithological Society 15(2): 29.

Zydelis, R., Small, C. and French, G. 2013. The incidental catch of seabirds in gillnet fisheries: A global review. Biological Conservation 162: 76-88.

del Hoyo, J., Collar, N.J., Christie, D.A., Elliott, A. and Fishpool, L.D.C. 2014. HBW and BirdLife International Illustrated Checklist of the Birds of the World. Volume 1: Non-passerines. Lynx Edicions BirdLife International, Barcelona, Spain and Cambridge, UK.

del Hoyo, J., Elliot, A. & Sargatal, J. (ed.). 1992. Handbook of the Birds of the World, Vol. 1: Ostrich to Ducks. Lynx Edicions, Barcelona, Spain.