



THE IUCN RED LIST
OF THREATENED SPECIES™



Corvus frugilegus (Rook)

European Red List of Birds

Supplementary Material

The European Union (EU27) 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 2013-14.

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 (2015).

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Recommended citation

BirdLife International (2015) European Red List of Birds. Luxembourg: Office for Official Publications of the European Communities.

Further information

- <http://www.birdlife.org/datazone/info/euroredlist>
- <http://www.birdlife.org/europe-and-central-asia/european-red-list-birds-0>
- <http://www.iucnredlist.org/initiatives/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.

Corvus frugilegus (Rook)

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

Country (or territory) ²	Population estimate				Short-term population trend ⁴				Long-term population trend ⁴				Subspecific population (where relevant)
	Size (pairs) ³	Europe (%)	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	
Armenia	7,000-15,000	<1	2002-2012	medium	?				?				
Austria	2,500-2,700	<1	2008-2010	good	+	200-250	2001-2012	good	+	500-700	1980-2012	good	
Azerbaijan	5,000-50,000	<1	1996-2000	poor	?				?				
Belarus	600,000-800,000	7	2001-2012	medium	0	0	2001-2012	medium	0	0	1980-2012	medium	
Belgium	20,000-25,000	<1	2008-2012	poor	0	0	2000-2012	medium	+	145-218	1973-2012	medium	
Bosnia & HG	3,000-5,000	<1	2010-2014	poor	-	10-20	2001-2012	poor	-	10-20	1980-2013	poor	
Bulgaria	12,000-23,000	<1	2005-2012	medium	0	0	2000-2012	poor	?				
Croatia	5,000-10,000	<1	2014	poor	?				?				
Czech Rep.	3,000-4,000	<1	2001-2003	good	?				+	11-15	1985-2003	medium	
Denmark	75,000	1	2011	medium	0	0	1999-2011	good	+	25-50	1980-2011	good	
Estonia	8,000-12,000	<1	2008-2012	medium	0	0-10	2001-2012	medium	-	20-50	1980-2012	medium	
Finland	1,500-1,600	<1	2006-2011	medium	0	0	2001-2012	medium	0	0	1980-2012	medium	
France	190,000-330,000	2	2008-2012	medium	-	0-20	2001-2012	poor	?				
Georgia	Present	<1			?				?				
Germany	80,000-89,000	1	2005-2009	good	+	13-36	1998-2008	good	+	171-352	1985-2008	good	
Greece	500-2,000	<1	2008-2012	poor	?				?				
Hungary	18,500-23,500	<1	2008-2012	medium	0	0	2000-2012	poor	-	90-93	1980-2012	good	
Rep. Ireland	1,110,025-3,146,340	16	2006-2011	good	-	19-34	1998-2011	good	?				
Kosovo	5,000-10,000	<1	2009-2014	medium	?				?				
Latvia	1,033-1,571	<1	2000-2004	good	?				-	78-89	1980-2004	medium	
Lithuania	30,000-60,000	<1	2008-2012	medium	-	10-30	2001-2012	medium	-	30-40	1980-2012	medium	
Luxembourg	3,300-3,500	<1	2008-2012	good	+	0-10	2000-2012	good	+	90-110	1980-2012	good	
FYRO Macedonia	2,000-5,000	<1	2001-2012	poor	?				?				
Moldova	20,000-30,000	<1	2000-2010	medium	F	0	2000-2010	medium	0	0	1980-2010	medium	
Netherlands	48,000-56,500	<1	2009-2011	good	-	20-28	2002-2011	good	+	24-40	1985-2011	good	
Norway	265-300	<1	2008-2013	medium	-	35-50	2000-2013	medium	-	35-50	1980-2013	medium	
Poland	250,000-310,000	3	2010-2012	good	-	20-60	2001-2012	good	?				
Romania	150,000-200,000	2	2006-2013	medium	-	3-38	2001-2013	medium	-	10-30	1980-2012	poor	
Russia	2,000,000-4,000,000	27	2000-2008	poor	-	5-10	2000-2012	poor	-	20-30	1980-2012	good	
Serbia	45,000-49,000	<1	2008-2012	medium	0	0	2000-2012	medium	-	1-9	1980-2012	medium	
Slovakia	700,000-1,000,000	8	2002	poor	0	0	2000-2012	poor	-	10-25	1980-2012	poor	
Slovenia	150-200	<1	2002-2012	medium	+	10-30	2001-2012	medium	+	50-100	1980-2012	medium	

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

Country (or territory) ²	Population estimate				Short-term population trend ⁴				Long-term population trend ⁴				Subspecific population (where relevant)
	Size (pairs) ³	Europe (%)	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	
Spain	1,399	<1	2011	good	0	0	1998-2011	good	+	55	1979-2011	good	
Sweden	43,000-53,000	<1	2008-2012	good	+	15-45	2001-2012	good	+	75-125	1980-2012	good	
Switzerland	5,526	<1	2008-2012	good	+	217	2001-2012	medium	+	6000	1980-2012	good	
Turkey	220,000-400,000	3	2013	poor	-	0-19	2000-2012	medium	-	0-19	1990-2013	poor	
Ukraine	1,500,000-2,200,000	17	2000	medium	F	15-20	1998-2010	medium	F	20-30	1980-2010	medium	
United Kingdom	1,000,000-1,200,000	10	2009	medium	-	20	1998-2010	good	+	9	1996-2009	medium	
EU27	3,750,000-6,620,000	46			Decreasing								
Europe	8,170,000-14,200,000	100			Decreasing								

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 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.

⁵ Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).

⁶ Trend magnitudes are rounded to the nearest integer.

Trend maps

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

KEY

- | | |
|----------------------------------|----------------------------------|
| ▲ Large increase ($\geq 50\%$) | ▼ Large decrease ($\geq 50\%$) |
| ▲ Moderate increase (20–49%) | ▼ Moderate decrease (20–49%) |
| ▲ Small increase (<20%) | ▼ Small decrease (<20%) |
| ↑ Increase of unknown magnitude | ↓ Decrease of unknown magnitude |

- Stable or fluctuating
- Unknown
- Present (no population or trend data)
- ✗ Extinct since 1980

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

- ↑ Large: $\geq 10\%$ of the European population
- ↑ Medium: 1–9% of the European population
- ↑ Small: <1% of the European population

The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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

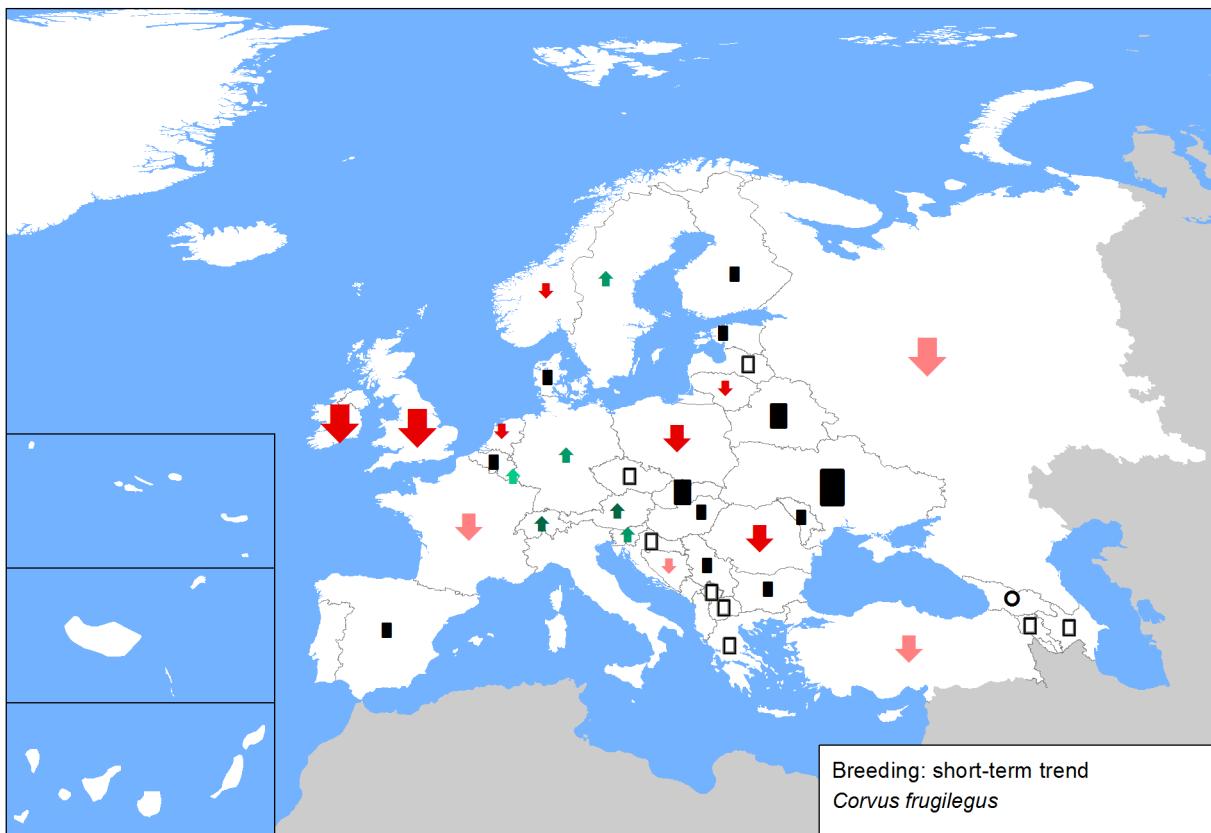
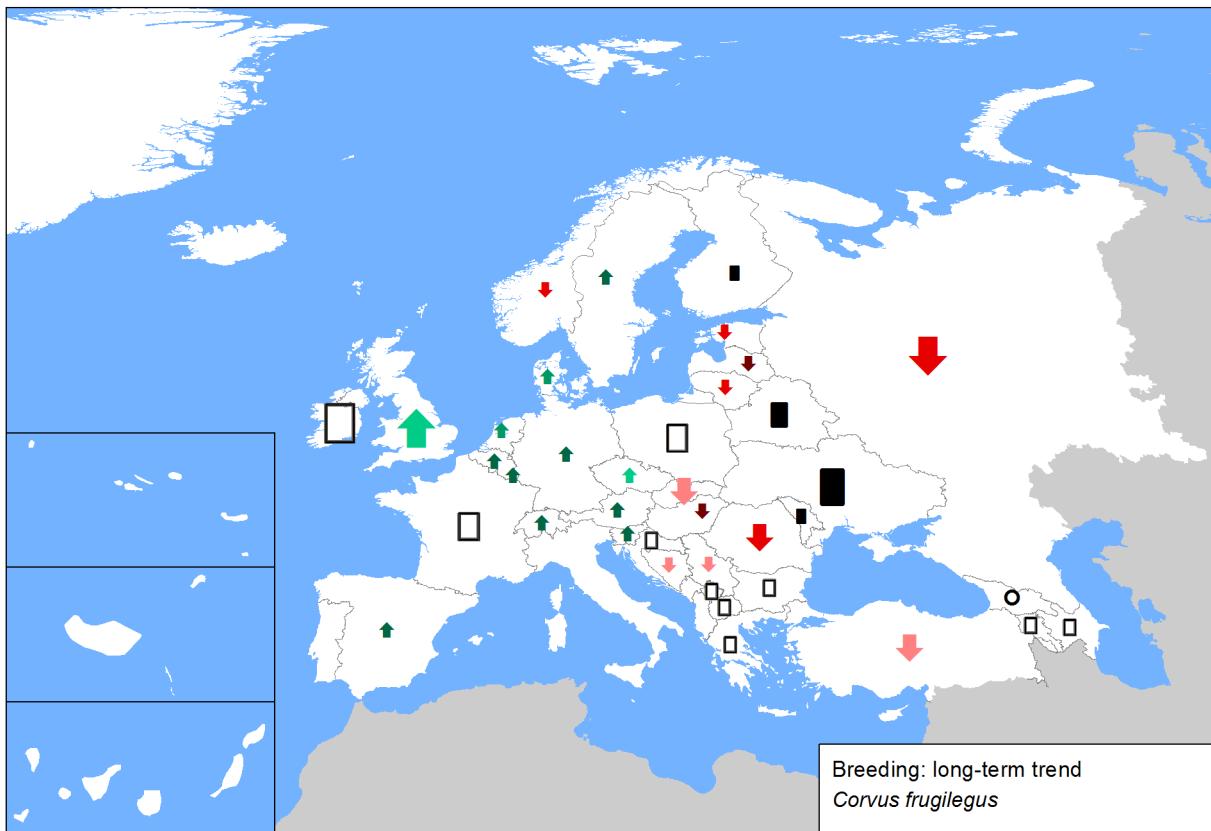


Figure 2. Breeding population sizes and long-term trends across Europe.



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Sources

Armenia

Breeding population size: ASPB data

Austria

Breeding population size: Ranner et al. (2010)

Breeding short-term trend: Ranner et al. (2010)

Breeding long-term trend: Dvorak et al. 1993

Azerbaijan

Breeding population size: BirdLife International 2004

Belarus

Breeding population size: Koloskov M.N. - personal communication

Breeding short-term trend: BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series, No 12).

Breeding long-term trend: Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p.

Belgium

Breeding population size: Data Breeding Bird atlas Wallonia (Jacob et al 2010), Brussels (Weiserbs 2012) and Flanders (Vermeersch et al 2004) in combination with trend data.

Breeding short-term trend: Common bird monitoring schemes

Breeding long-term trend: Comparison between 2008-2012 estimate and Devillers, 1989 (Atlas of the Belgian Breeding Bird) population estimate

Bosnia and Herzegovina

Breeding population size: Kotrošan, D., Drocic, N., Trbojević, S., Šimić, E., Dervović, I., 2012: Program IBA, Međunarodno značajna područja za ptice, u Bosni i Hercegovini. Ornitolosko društvo "Naše ptice", interni izdanje za projekat "Evaluacija IBA područja u FBiH", Sarajevo.

Breeding short-term trend: Kotrošan, D., 2006: Kolonije gačca (*Corvus frugilegus*) u Srebreniku i Doboju. Bilten Mreže posmatrača ptica u Bosni i Hercegovini, 2(2): 30., Mulaomerović, J., 2005: Kolonija vrana gačaca (*Corvus frugilegus*) u Zavidovićima. Bilten Mreže posmatrača ptica u Bosni i Hercegovini, 1(1): 50.

Breeding long-term trend: Urankar, D., 1991: Gniježđenje vrane gačac (*Corvus frugilegus frugilegus* L.) na području Tuzle. Članci i građa za kulturnu istoriju istočne Bosne, 16: 111-120., Obratil, S., 1979: Gniježđenje vrana gačca (*Corvus frugilegus frugilegus Linnaeus, 1758*) u Bosni i Hercegovini. GZM BiH (PN) NS 18: 251-259.

Bulgaria

Breeding population size: expert opinion

Breeding short-term trend: expert opinion

Breeding long-term trend: Iankov P. (ed.) 2007. Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 80-81;

Croatia

Breeding population size: BiE III Work group, Croatia

Breeding short-term trend: BiE III Work group, Croatia

Breeding long-term trend: BiE III Work group, Croatia

Czech Republic

Breeding population size: STASTNY K., BEJCEK V. & HUDEC K. 2006: Atlas hnizdnih rozsireni ptaku v Ceske republike. Aventinum Praha.

Breeding long-term trend: STASTNY K., BEJCEK V. & HUDEC K. 2006: Atlas hnizdnih rozsireni ptaku v Ceske republike. Aventinum Praha.

Denmark

Breeding population size: BIRDLIFE INTERNATIONAL (2004) Birds in Europe: population estimates, trends and conservation status. Wageningen, The Netherlands: BirdLife International. (BirdLife Conservation Series No. 12) Heldbjerg, H. & Lerche-Jørgensen, M. (2012): Overvågning af de danske almindelige fuglearter i Danmark 1975-2011. Årsrapport for Punkttællingsprojektet. Dansk Ornitolologisk Forening. (The Danish Point Count Census for breeding birds during the period 1999-2011)

Breeding short-term trend: Heldbjerg, H. & Lerche-Jørgensen, M. (2012): Overvågning af de danske almindelige fuglearter i Danmark 1975-2011. Årsrapport for Punkttællingsprojektet. Dansk Ornitolologisk Forening. (The Danish Point Count Census for breeding birds during the period 1999-2011)

Breeding long-term trend: Heldbjerg, H. & Lerche-Jørgensen, M. (2012): Overvågning af de danske almindelige fuglearter i Danmark 1975-2011. Årsrapport for Punkttællingsprojektet. Dansk Ornitolologisk Forening. (The Danish Point Count Census for breeding birds during the period 1980-2011)

Estonia

Breeding population size: Elts, J., Leito, A., Leivits, A., Luigjõe, L., Mägi, E., Nellis, Rein, Nellis, Renno, Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008-2012. Hirundo 26(2): 80-112. URL: http://www.eoy.ee/hirundo/file_download/149/Elts_et_al_2013_2.pdf

Breeding short-term trend: Elts, J., Leito, A., Leivits, A., Luigjõe, L., Mägi, E., Nellis, Rein, Nellis, Renno, Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008-2012. Hirundo 26(2): 80-112. URL: http://www.eoy.ee/hirundo/file_download/149/Elts_et_al_2013_2.pdf

Breeding long-term trend: Elts, J., Leito, A., Leivits, A., Luigjõe, L., Mägi, E., Nellis, Rein, Nellis, Renno, Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008-2012. Hirundo 26(2): 80-112. URL: http://www.eoy.ee/hirundo/file_download/149/Elts_et_al_2013_2.pdf

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Finland

Breeding population size: BirdLife Finland 2013: Regional observation summary database of Finnish Birdwatching societies on scarce bird species.
Breeding short-term trend: BirdLife Finland 2013: Regional observation summary database of Finnish Birdwatching societies on scarce bird species.
Breeding long-term trend: Rytönen, S., Koivula, K. & Lindgren, E. 1990: Mustavarisyhdyskuntien ekologia Oulun seudulla. - Selvitys nro 78. Ympäristöministeriö, Helsinki. 52 s. (in Finnish). BirdLife Finland 2013: Regional observation summary database of Finnish Birdwatching societies on scarce bird species.

France

Breeding population size: http://www.atlas-ornitho.fr DEBOUT G. 2003 Le corbeau freux (<i>Corvus frugilegus</i>) nicheur en Normandie : recensement 1999 & 2000 - , 115-121
Breeding short-term trend: http://vigenature.mnhn.fr/page/corbeau-freux
Breeding long-term trend: http://vigenature.mnhn.fr/page/corbeau-freux

Georgia

Breeding population size: BirdLife International 2004
--

Germany

Breeding population size: Gedeon, K., C. Grüneberg, A. Mitschke & C. Sudfeldt (in Vorb.): Atlas Deutscher Brutvogelarten. SVD & DDA, Münster.
Breeding short-term trend: Monitoring seltener Brutvögel
Breeding long-term trend: Monitoring seltener Brutvögel

Greece

Breeding population size: BirdLife International 2004. Birds in Europe - Population estimates, trends and conservation status. Cambridge, UK, BirdLife International (BirdLife Conservation Series No 12).

Hungary

Breeding population size: National Park Directorates databases Breeding bird (MME RTM) database.
Breeding short-term trend: National Park Directorates databases Breeding bird (MME RTM) database. Direction based on expert opinion.
Breeding long-term trend: National Park Directorates databases Breeding bird (MME RTM) database. Haraszthy L. (szerk.) (1984): Magyarország fészkelő madarai. Natura, Budapest. 247 p.

Republic of Ireland

Breeding population size: Crowe, O., Musgrove, A.J. & O'Halloran, J. (2014). Generating population estimates for common and widespread breeding birds in Ireland. Bird Study 61 (1) 82 - 90.
Breeding short-term trend: Crowe, O. (2013). Calculation of short-term trends for Common and Widespread Breeding Birds for Article 12 Reporting. Unpublished report.
Breeding long-term trend: Balmer, D., Gillings, S., Caffrey, B., Swan, B., Downie, I. & Fuller, R. (2013) Bird Atlas 2007-11 The breeding and wintering birds of Britain and Ireland. British Trust for Ornithology. Expert opinion - O. Crowe, BirdWatch Ireland, http://birdwatchireland.ie/ . Sharrock, J.T.R. (1976) The Atlas of Breeding Birds in Britain and Ireland. T. & AD Poyser.

Kosovo

Breeding population size: NGO "Finch" (2014)

Latvia

Breeding population size: Kerus V. 2011. Latvijas ligzdojoso putnu stavokla parmainas laika no 1980. līdz 2010. gadam. Promocijas darbs. Riga: Latvijas Universitate
Breeding long-term trend: Piednieks J., Strazds M., Strazds A., Petrins A. 1989. Latvian Breeding Bird Atlas 1980-1984. Riga: Zinatne. Kerus V. 2011. Latvijas ligzdojoso putnu stavokla parmainas laika no 1980. līdz 2010. gadam. Promocijas darbs. Riga: Latvijas Universitate

Lithuania

Breeding population size: Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2012. Lietuvos paukščių pažinimo vadovas. Kaunas: „Lututė“, 288 p.
Breeding short-term trend: Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2012. Lietuvos paukščių pažinimo vadovas. Kaunas: „Lututė“, 288 p. Kurlavičius, P. (ed.) 2006. Lietuvos perlinčių paukščių atlasis. Kaunas: „Lututė“, 256 p. Raudonikis L. 2004. Lithuania. In: Birds in Europe: population estimates, trends, and conservation status. BirdLife International, BirdLife Conservation Series No12, Cambridge, UK.
Breeding long-term trend: Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Tucker, G.M. & Heath, M.F. 1994. Birds in Europe: their conservation status. - BirdLife International (BirdLife Conservation series No.3), Cambridge, UK. BirdLife International/European Bird Census Council. 2000. European bird populations: estimates and trends. Cambridge, UK: BirdLife International (BirdLife Conservation Series No. 10). Kurlavičius, P. (ed.) 2006. Lietuvos perlinčių paukščių atlasis. Kaunas: „Lututė“, 256 p.

Luxembourg

Breeding population size: LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Biver G. (2009): Die Saatkrähe Corvus frugilegus in Luxemburg 2008. Regulus Wissenschaftliche Berichte, 24: 33-39 (http://www.luxnatur.lu/publi/wb24001072.pdf#page33) Biver G., F. Muller (2011): Le Corbeau freux à Luxembourg-Ville. Regulus 8/2011: 10-11 Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3
Breeding short-term trend: Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Biver G. (2009): Die Saatkrähe Corvus frugilegus in Luxemburg 2008. Regulus Wissenschaftliche Berichte, 24: 33-39 (http://www.luxnatur.lu/publi/wb24001072.pdf#page33) Biver G., F. Muller (2011): Le Corbeau freux à Luxembourg-Ville. Regulus 8/2011: 10-11 Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3

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Luxembourg

Breeding long-term trend: Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Biver G. (2009): Die Saatkrähe Corvus frugilegus in Luxemburg 2008. Regulus Wissenschaftliche Berichte, 24: 33-39 (<http://www.luxnatur.lu/publi/wb24001072.pdf#page33>) Biver G., F. Muller (2011): Le Corbeau freux à Luxembourg-Ville. Regulus 8/2011: 10-11 Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3 Melchior E., E. Mentgen, R. Peltzer, R. Schmitt, J. Weiss (1987): Atlas der Brutvögel Luxemburgs. Lëtzebuerger Natur- a Völleschutzliga. Kremer-Muller & Cie, Foetz, Luxembourg

The Former Yugoslav Republic of Macedonia

Breeding population size: M. Velevski, unedited data

Moldova

Breeding population size: The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p.

Breeding short-term trend: The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p. Unpublished data from reports of laboratory Ornithology

Breeding long-term trend: Burfield I., Bommel van F., Birds in Europe. Population estimates, trends and conservation status. BirdLife International. Oxford, 2004. 374p. Аверин Ю. В., Ганя И.М., Успенский Г. Птицы Молдавии, Кишинев, 1981, 240p

Netherlands

Breeding population size: NEM, Sovon en CBS (Boele et al. 2011-2013, van Dijk et al 2010)

Breeding short-term trend: NEM, Sovon en CBS, Boele et al. (2013)

Breeding long-term trend: Sovon

Norway

Breeding population size: 1). County bird recording committees (LRSK). 2). www.artsobservasjoner.no

Breeding short-term trend: Artsobservasjoner.no

Breeding long-term trend: 1). Gjershaug, J.O., Thingstad, P.G., Eldøy, S., & Byrkjedal, S. (red.). 1994. Norsk Fugleatlas. Norsk Ornitologisk Forening, Klæbu. 552 sider. 2). Røskaff, E. 1994. Kornkråke Corvus frugilegus. s. 448 i: Gjershaug, J.O., Thingstad, P.G., Eldøy, S., & Byrkjedal, S. (red.). Norsk Fugleatlas. Norsk Ornitologisk Forening, Klæbu. 3). Tøråsen, A. 1993. Registrering av kornkråke 1993. Kornkråka 23: 62. 4). Tøråsen, A. 2009. Kornkråka på Hedmarken 2009. Kornkråka 39: 57-58. 5). Tøråsen, A. 2011. Kornkråka på Hedemarken 2011. Kornkråka 41: 85. 6). Gaarder, G. 1986. Kornkråkas status i Oppland. Hujon 12: 112-115. 7). Høitomt, G. 2011. Kornkråke (Corvus frugilegus) i Oppland, 2010. Hujon 37: 172-183.

Poland

Breeding population size: Chodkiewicz T., Kuczyński L., Sikora A., Ławicki Ł., Chylarecki P., Neubauer G., Meissner W., Rohde Z. 2013. Opracowanie raportu dla Komisji Europejskiej z wdrażania Dyrektywy Ptasiej w Polsce w zakresie Monitoringu Ptaków Polski w Państwowym Monitoringu Środowiska. Sprawozdanie dla Głównego Inspektoratu Ochrony Środowiska. OTOP, Marki.

Breeding short-term trend: MFGP: Sikora A., Chodkiewicz T., Rohde Z. 2012. Monitoring Flagowych Gatunków Ptaków. In: Podsumowanie sezonu lęgowego Monitoringu Ptaków Polski w 2012 r. OTOP, MilZ, KOO, SOS: 47-61 (source: http://monitoringptakow.gios.gov.pl/raporty?file=files/pliki/raporty_faza4/RaportMPP4_etap1_zad2%264_wiosna2012.pdf)

Romania

Breeding population size: LIFE05 NAT/HU/000122 "Milvus Group" Bird and Nature Protection Association database (unpublished data)

Breeding short-term trend: LIFE05 NAT/HU/000122

Breeding long-term trend: "Milvus Group" Bird and Nature Protection Association database (unpublished data)

Russia

Breeding population size: Belik V.P. 2005. Cadastre of breeding avifauna of South Russia. Strepet 3, no. 1-2: 5-37 (in Russian). Ravkin E.S., Ravkin Yu.S. 2005. Birds of Northern Eurasian plains: numbers, distribution, spatial organization of communities. Novosibirsk, Nauka: 304 p. (in Russian). Numerov A.D. 1996. Class Birds Aves. – Natural resources of Voronezh Region. Vertebrate Animals. Cadaster. Voronezh, Biomik: 48-159 (in Russian). Sarychev V.S. (ed.) 2009. Vertebrates of Lipetsk Region. Voronezh: 494 p. Sarychev V.S., unpublished. vssar@yandex.ru

Breeding short-term trend: Sarychev V.S. (ed.) 2009. Vertebrates of Lipetsk Region. Voronezh: 494 p. Sarychev V.S., unpublished. vssar@yandex.ru Belik V.P., unpublished. vpbelik@mail.ru

Breeding long-term trend: Belik V.P. 2005. Cadastre of breeding avifauna of South Russia. Strepet 3, no. 1-2: 5-37 (in Russian). Shepel A.I., unpublished. shai53@mail.ru Yakovleva M.V., unpublished. kivach-bird@rambler.ru Sarychev V.S. (ed.) 2009. Vertebrates of Lipetsk Region. Voronezh: 494 p. Sarychev V.S., unpublished. vssar@yandex.ru Preobrazhenskaya E.S., unpublished. voop21@rambler.ru

Serbia

Breeding population size: BPSSS (2014) Unpublished data

Breeding short-term trend: BPSSS (2014) Unpublished data

Breeding long-term trend: BPSSS (2014) Unpublished data

Slovakia

Breeding population size: Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

Breeding short-term trend: Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

Breeding long-term trend: Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

Slovenia

Breeding population size: Mihelič, T. (2013): Novi ornitološki atlas gnezdiški Slovenije 2002-2010. Internetna baza podatkov. Spletna stran: <http://www.ptice.si/atlas>. Društvo za opazovanje in proučevanje ptic Slovenije, DOPPS - BirdLife Slovenija. Ljubljana.

Corvus frugilegus (Rook)

Slovenia

Breeding short-term trend: Mihelič, T. (2013): Novi ornitološki atlas gnezdkl Slovenije 2002-2010. Internetna baza podatkov. Spletna stran: <http://www.ptice.si/atlas>. Društvo za opazovanje in proučevanje ptic Slovenije, DOPPS - BirdLife Slovenija. Ljubljana.

Breeding long-term trend: Mihelič, T. (2013): Novi ornitološki atlas gnezdkl Slovenije 2002-2010. Internetna baza podatkov. Spletna stran: <http://www.ptice.si/atlas>. Društvo za opazovanje in proučevanje ptic Slovenije, DOPPS - BirdLife Slovenija. Ljubljana.

Spain

Breeding population size: García Fernández, J. (2012). La graja en España. Población reproductora en 2011 y método de censo. SEO/BirdLife. Madrid. 38 pp. http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/37_Graja_tcm7-219796.pdf

Breeding short-term trend: García Fernández, J. (2012). La graja en España. Población reproductora en 2011 y método de censo. SEO/BirdLife. Madrid. 38 pp. http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/37_Graja_tcm7-219796.pdf SEO/BirdLife (2012). Resultados del programa Sacre de SEO/BirdLife en 2011. SEO/BirdLife. Madrid.

Breeding long-term trend: García Fernández, J. (2012). La graja en España. Población reproductora en 2011 y método de censo. SEO/BirdLife. Madrid. 38 pp. http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/37_Graja_tcm7-219796.pdf

Sweden

Breeding population size: Ottosson, U., Ottvall, R., Elmberg, 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. Sveriges Ornitolologiska Förening, Halmstad.

Breeding short-term trend: Swedish Bird Survey (Svensk Fågeltaxering), Lund University.

Breeding long-term trend: Swedish Bird Survey (Svensk Fågeltaxering), Lund University.

Switzerland

Breeding population size: Swiss Ornithological Institute: <http://www.vogelwarte.ch/monitoring-ausgewahlte-arten.html>

Breeding short-term trend: Swiss Ornithological Institute: <http://www.vogelwarte.ch/monitoring-ausgewahlte-arten.html> Min Max based on absolute number of nests

Breeding long-term trend: Swiss Ornithological Institute: <http://www.vogelwarte.ch/monitoring-ausgewahlte-arten.html> Min Max based on absolute number of nests

Turkey

Breeding population size: Murat Bozdoğan, Zeynel Arslangündoğdu personal communication. Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12) www.kusbanks.org Kirwan G.M., Boyla K. A., Castell P., Demirci B., Özén M., Welch H., Marlow T., 2008, Birds of Turkey. Londra, Christopher Helm, 978-1-4081-0475-

Breeding short-term trend: Doğa Derneği, Eken G., Bozdoğan M., İsfendiyaroğlu S., Kılıç D.T., Lise Y. (2006) Key Biodiversity Areas of Turkey (Türkiye'nin Önemli Doğa Alanları) Doğa Derneği, Ankara, KILIÇ, T., EKEN, G. 2004, Türkiye'nin Önemli Kuş Alanları Güncellemesi, Doğa Derneği. Ankara.

Breeding long-term trend: Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12)

Ukraine

Breeding population size: 1. Hagemeijer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. - London. 1997. 903 p. 2. Heath M.F., Evans M.I. Important birds areas in Europe. Priority sites for conservation. // Southern Europe. BirdLife International. - Cambridge. Vol.2., 2000. P. 691-724. 3. European birds populations; Estimates and trends Compiled by M. Heath, C. Borggreve, N. Peet, W. Hagemeijer/ BirdLife International/EBCC. 2000. Cambridge, UK: BirdLife Conservation Series N10, 160 p. 4. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158.

Breeding short-term trend: 1. Бокотей А.А., Дзюбенко Н.В., Горбань І.М. та інші. Гніздова орнітофауна басейну Верхнього Дністра. – Львів: ЛНУ, 2010. – 400 с. 2. Dombrowski A., Piotrowska M., Gorban I., Nikiforov M. Status and threats to avifauna. (Eds. Dombrowski A., & Z. Glowacki, та інші). Bug river valleyas the ecological corridor: state-threats-protection. IUCN European Programme. Warsaw. 2002. S. 87-102. 3. Горбань І.М. Рідкінні види птахів Шацького національного парку. // Вісник Львівського університету. Серія біологічна. Вип. 29. 2002. С. 188-199.

Breeding long-term trend: 1. Tucker G.M., Heath M.F. Birds in Europe: their conservation status. - Cambridge. U.K. Bird Life Conservation Series №. 3. 1994. 600 p. 2. Hagemeijer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. - London. 1997. 903 p. 3. Heath M.F., Evans M.I. Important birds areas in Europe. Priority sites for conservation. // Southern Europe. BirdLife International. - Cambridge. Vol.2., 2000. P. 691-724. 4. European birds populations; Estimates and trends Compiled by M. Heath, C. Borggreve, N. Peet, W. Hagemeijer/ BirdLife International/EBCC. 2000. Cambridge, UK: BirdLife Conservation Series N10, 160 p. 5. Горбань І.М., Бокотей А.А. Вплив трансформаційних процесів на фауну та населення птахів басейну Верхнього Дністра. Дослідження басейнової екосистеми Верхнього Дністра. Збірник наукових праць. 2000. С.145 – 155. 6. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158. 7. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 р. 8. Бокотей А.А., Дзюбenko Н.В., Горбань І.М. та інші. Гніздова орнітофауна басейну Верхнього Дністра. – Львів: ЛНУ, 2010. – 400 с.

United Kingdom

Breeding population size: Marchant & Gregory 1999; Musgrove, A.J., Aebscher, N.J., Eaton, M.A., Hearn, R.D., Newson, S.E., Noble, D.G., Parsons, M., Risely, K. & Stroud, D.A. 2013. Population estimates of birds in Great Britain and the United Kingdom. British Birds 106: 64-100.

Breeding short-term trend: BTO/JNCC/RSPB Breeding Bird Survey data: Risely, K., Massimino, D., Johnston, A., Newson, S.E., Eaton, M.A., Musgrove, A.J., Noble, D.G., Procter, D. & Baillie, S.R. 2012. The Breeding Bird Survey 2011. BTO Research Report 624. British Trust for Ornithology, Thetford. <http://www.bto.org/sites/default/files/u16/downloads/reports/bbsreport11.pdf>

Breeding long-term trend: Marchant, J.H. & Gregory, R.D. 1999. Numbers of nesting Rooks *Corvus frugilegus* in the United Kingdom in 1996. Bird Study 46: 258-273. Musgrove, A.J., Aebscher, N.J., Eaton, M.A., Hearn, R.D., Newson, S.E., Noble, D.G., Parsons, M., Risely, K. & Stroud, D.A. 2013. Population estimates of birds in Great Britain and the United Kingdom. British Birds 106: 64-100.

Bibliography

- Hagemeijer, W.J.M. and Blair, M.J. 1997. *The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance*. T & A D Poyser, London.
- Madge, S. and Burn, H. 1993. *Crows and jays*. A&C Black.
- Madge, S. 2009. Rook (*Corvus frugilegus*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E. (eds.). 2014. *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. (retrieved from <http://www.hbw.com/node/60784> on 9 March 2015).