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Quartile estimation

For each species we calculated the median, Q1 and Q3 annualized change rates from all locations for which estimates were available, using the *quantile* function in *R* (3.0.1: R Development Core Team 2009). This returns estimates of underlying distribution quantiles based on one- or two order statistics, corresponding to given probabilities, where the smallest observation corresponds to a probability of 0 and the largest to a probability of 1. Sample quantiles were defined by:

$$Q(p) = (1 - \gamma) x[j] + \gamma x[j+1],$$

where: $(j-m)/n \leq p < (j-m+1)/n$; $x[j]$ is the j th order statistic; n is the sample size; the value of γ is a function of $j = \text{floor}(np + m)$ and $g = np + m - j$; and m is a constant.

The sample quantiles can be obtained by linear interpolation between the points $(p[k], x[k])$ where $x[k]$ is the k th order statistic. The generic function *quantile* allows the user to select one of nine quantile algorithms described by Hyndman and Fan (1996). In this analysis we used algorithm 7 (the *R* default), in which $\text{gamma} = g$ and the constant $m = 1-p$, $p[k] = (k - 1) / (n - 1)$, and $p[k] = \text{mode}[F(x[k])]$.

Although algorithm 7 was used throughout the analysis, we compared the estimates it provided with those from the remaining eight algorithms. With one exception, the nine algorithms yielded median decline rates which, over three generations, were always similar for a given species, with regards to whether the species exceeded the 80% decline threshold specified in IUCN Red List Criterion A4. The exception was Bearded Vulture, for which algorithm 7 yielded a median decline estimate of 70% over three generations, whereas one alternative algorithm (4) yielded a decline estimate of 93%.

References:

Hyndman, R.J. & Fan, Y. (1996). Sample quantiles in statistical packages. *American Statistician* **50** 361–365.

R Development Core Team (2009). *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna.

Table S1 Changes in national vulture populations. Values show the number of vulture species considered to be declining at a given rate in each country. Numbers refer to only those species for which data were available and may not be inclusive of all species in a given country. Countries for which there was insufficient information have been excluded.

Country	Region	Decline			Source
		Extinct/ severe decline (>50%)	Strong decline (>25%)	Moderate decline (<25%)	
Algeria	North	1	1		Cherkaoui 2005
Burkina Faso	West		6		Rondeau & Thiollay 2004
Cameroon	Central		6		Thiollay 2001, Buij unpub.
Cape Verde	West	1			Hille & Collar 2011
Chad	Central		5		Thiollay unpub.
Egypt	North	1	2		Mullié & Meininger 1985
Ivory Coast	West		3		Thiollay unpub.
Kenya	East	1	6		Ogada & Keesing 2010, Virani <i>et al.</i> 2011, Ogada, Thiollay & Virani unpub.
Lesotho	Southern	1	2		Maphisa 1997, Krüger <i>et al.</i> 2014
Libya	North	1			Toschi 1969, Levy 1996
Malawi	Southern		4		Roxburgh & McDougall 2012
Mali	West		6		Rondeau & Thiollay 2004
Morocco	North	3			Thévenot <i>et al.</i> 1985, Cherkaoui 2005, Sayad 2007, Cherkaoui pers. comm.
Namibia	Southern	1	1	2	Brown 1985, Simmons & Brown 2013
Niger	West		6		Rondeau & Thiollay 2004
Nigeria	West	5	1		Tende & Ottosson 2008, Akagu & Adeleke 2012
South Africa	Southern	1	3	3	Tarboton & Allan 1984, Brown 1991, Anderson 2000, Mum <i>et al.</i> 2013, Krüger <i>et al.</i> 2014

Country	Region	Decline				Source
		Extinct/ severe decline (>50%)	Strong decline (>25%)	Moderate decline (<25%)	No decline	
Sudan	North	4				Wilson 1982
Swaziland	Southern	2			1	Monadjem 2003, Monadjem & Garcelon 2005, Monadjem unpub.
Tanzania	East	1	1	1	3	Baker unpub.
Tunisia	North	3				Gaultier 1985
Uganda	East	1	5			Pomeroy, Thiollay, Opige & Kaphu unpub.
Total*		27	58	6	4	
		28%	61%	6%	4%	

* Number of national populations (vulture species x countries) in each category

Table S2 Sources used to estimate rates of change in vulture populations. Entries show the percentage change recorded at a given location, the relevant time span and the annualized percentage change. Change rates were collated from 16 studies in 12 countries: Botswana, Burkina Faso, Cameroon, Kenya, Lesotho, Mali, Morocco, Namibia, Niger, South Africa, Swaziland and Uganda. The mean starting year for surveys was 1972 and the mean end year was 2008.

Species	Region	Counties	Method	Measure	Scale*	Time span (years)	% Change	Annualized % Change	Source
Bearded Vulture <i>Gypaetus barbatus</i>	Southern	South Africa	Breeding census	Occupied territories	190 territories	50.0	-41.5%	-1.1%	Krüger <i>et al.</i> 2014
	Southern	South Africa	Breeding census	Occupied territories	-	44.0	-63.0%	-2.2%	Krüger & van Zyl 2004
	North	Morocco	Breeding census	Occupied territories	-	30.0	-90.0%	-7.4%	Cherkaoui 2005
Egyptian Vulture <i>Neophron percnopterus</i>	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,222 km	36.0	-6.0%	-0.2%	Buij unpub.
	West	Burkina Faso, Mali, Niger	Road survey	Birds 100 km ⁻¹	8,000 km	32.5	-86.0%	-5.9%	Rondeau & Thiollay 2004
	East	Kenya	Road survey	Birds 100 km ⁻¹	3,400 km	29.0	-99.9%	-21.2%	Virani <i>et al.</i> 2011
Hooded Vulture <i>Necrosyrtes monachus</i>	East	Uganda	Selected sites	Individuals	-	39.0	-11.0%	-0.3%	Ssemmanda & Pomeroy 2010
	West	Burkina Faso, Mali, Niger	Road survey	Birds 100 km ⁻¹	8,000 km	32.5	-45.0%	-1.8%	Rondeau & Thiollay 2004
	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,222 km	36.0	-51.0%	-2.0%	Buij unpub.
	East	Kenya	Road survey	Birds 100 km ⁻¹	3,400 km	29.0	-62.0%	-3.3%	Virani <i>et al.</i> 2011
	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,359 km	27.0	-67.0%	-4.0%	Thiollay 2001
	East	Uganda	Road survey	Birds 100 km ⁻¹	12,900 km	35.5	-88.0%	-5.8%	Pomeroy, Thiollay, Opige & Kaphu unpub.
	East	Kenya	Road survey	Birds 100 km ⁻¹	9,000 km	29.5	-98.0%	-12.4%	Ogada, Thiollay & Virani unpub.
	East	Kenya	Road survey	Birds 100 km ⁻¹	9,000 km	29.5	-98.0%	-12.4%	Ogada, Thiollay & Virani unpub.
White-backed Vulture <i>Gyps africanus</i>	Southern	South Africa	Aerial survey	Nest counts	~900 km ²	29.0	145.0%	3.1%	Hitchins 1980, Bamford <i>et al.</i> 2009
	East	Kenya	Road survey	Birds 100 km ⁻¹	3,400 km	29.0	-52.0%	-2.5%	Virani <i>et al.</i> 2011

Species	Region	Counties	Method	Measure	Scale*	Time span (years)	% Change	Annualized % Change	Source
White-backed Vulture <i>G. africanus</i>	Southern	South Africa	Aerial survey	Nest counts	3,500 km ²	27.0	-50.0%	-2.5%	Murn <i>et al.</i> 2013
	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,359 km	27.0	-60.0%	-3.3%	Thiollay 2001
	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,222 km	36.0	-83.0%	-4.8%	Buij unpub.
	East	Uganda	Road survey	Birds 100 km ⁻¹	12,900 km	35.5	-85.0%	-5.2%	Pomeroy, Thiollay, Opige & Kaphu unpub.
	East	Kenya	Road survey	Birds 100 km ⁻¹	9,000 km	29.5	-83.0%	-5.8%	Ogada, Thiollay & Virani unpub.
	West	Burkina Faso, Mali, Niger	Road survey	Birds 100 km ⁻¹	8,000 km	32.5	-97.0%	-10.2%	Rondeau & Thiollay 2004
Rüppell's Vulture <i>G. rueppellii</i>	East	Kenya	Road survey	Birds 100 km ⁻¹	3,400 km	29.0	-52.0%	-2.5%	Virani <i>et al.</i> 2011
	East	Uganda	Road survey	Birds 100 km ⁻¹	12,900 km	35.5	-82.0%	-4.7%	Pomeroy, Thiollay, Opige & Kaphu unpub..
	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,222 km	36.0	-84.0%	-5.0%	Buij unpub.
	East	Kenya	Road survey	Birds 100 km ⁻¹	9,000 km	29.5	-83.0%	-5.8%	Ogada, Thiollay & Virani unpub.
	West	Cameroon†	Road survey	Birds 100 km ⁻¹	1,359 km	27.0	-87.0%	-7.3%	Thiollay 2001
	West	Burkina Faso, Mali, Niger	Road survey	Birds 100 km ⁻¹	8,000 km	32.5	-96.0%	-9.4%	Rondeau & Thiollay 2004
	West	Cameroon†	Breeding census	Breeding pairs	-	17.0	-99.9%	-33.4%	Buij & Croes 2014
Cape Vulture <i>G. coprotheres</i>	Southern	Botswana	Breeding census	Occupied nests	-	19.0	-45.0%	-3.1%	Borello & Borello 1993
	Southern	Namibia	Breeding census	Occupied nests	-	61.0	-96.0%	-5.1%	Simmons & Brown 2013
	Southern	South Africa, Lesotho, Swaziland	Breeding census	Occupied nests	-	6.0	-33.0%	-6.5%	Anderson 2000

Species	Region	Counties	Method	Measure	Scale*	Time span (years)	% Change	Annualized % Change	Source
Lappet-faced Vulture <i>Torgos tracheliotos</i>	Southern	South Africa	Aerial survey	Nest counts	3,500 km ²	27.0	0.0%	0.0%	Murn <i>et al.</i> 2013
	Southern	South Africa	Aerial survey	Nest counts	~900 km ²	29.0	-48.0%	-2.2%	Hitchins 1980, Bamford <i>et al.</i> 2009
	East	Kenya	Road survey	Birds 100 km ⁻¹	3,400 km	29.0	-50.0%	-2.4%	Virani <i>et al.</i> 2011
	East	Kenya	Road survey	Birds 100 km ⁻¹	9,000 km	29.5	-65.0%	-3.5%	Ogada, Thiollay & Virani unpub.
	East	Uganda	Road survey	Birds 100 km ⁻¹	12,900 km	35.5	-78.0%	-4.2%	Pomeroy, Thiollay, Opige & Kaphu unpub.
	West	Cameroon [†]	Road survey	Birds 100 km ⁻¹	1,222 km	36.0	-83.0%	-4.8%	Buij unpub.
	West	Burkina Faso, Mali, Niger	Road survey	Birds 100 km ⁻¹	8,000 km	32.5	-97.0%	-10.2%	Rondeau & Thiollay 2004
White-headed Vulture <i>Trigonoceps occipitalis</i>	Southern	South Africa	Aerial survey	Nest counts	3,500 km ²	27.0	0.0%	0.0%	Murn <i>et al.</i> 2013
	East	Kenya	Road survey	Birds 100 km ⁻¹	3,400 km	29.0	-44.0%	-2.0%	Virani <i>et al.</i> 2011
	East	Uganda	Road survey	Birds 100 km ⁻¹	12,900 km	35.5	-86.0%	-5.4%	Pomeroy, Thiollay, Opige & Kaphu unpub.
	West	Cameroon [†]	Road survey	Birds 100 km ⁻¹	1,222 km	36.0	-95.0%	-8.0%	Buij unpub.
	East	Kenya	Road survey	Birds 100 km ⁻¹	9,000 km	29.5	-94.0%	-9.1%	Ogada, Thiollay & Virani unpub.
	West	Burkina Faso, Mali, Niger	Road survey	Birds 100 km ⁻¹	8,000 km	32.5	-99.9%	-19.1%	Rondeau & Thiollay 2004

* The total distance (road surveys) or area (tree nest counts) surveyed, as an indication of the scale of each study.

[†] For the purpose of estimating regional trends (Figure 1), Cameroon has been included here in West Africa, being the only Central African country for which trend data were available.

Table S3 Mean (\pm s.e.) birds detected 100 km⁻¹ during road counts in West and East Africa over two survey periods.

Species	West Africa*				East Africa [†]			
	Protected areas		Unprotected		Protected areas		Unprotected	
	1969-73	2003-04	1969-73	2003-04	1974-88	2008-13	1974-88	2008-13
Hooded Vulture <i>Necrosyrtes monachus</i>	23.60 \pm 5.70	16.20 \pm 6.00	84.40 \pm 12.10	46.40 \pm 11.20	12.75 \pm 5.94	0.42 \pm 0.26	3.72 \pm 1.40	1.76 \pm 0.60
White-backed Vulture <i>Gyps africanus</i>	30.80 \pm 5.90	15.40 \pm 8.10	9.80 \pm 1.60	0.30 \pm 0.30	69.26 \pm 11.19	10.85 \pm 3.78	7.72 \pm 4.17	1.22 \pm 0.78
Rüppell's Vulture <i>G. rueppellii</i>	3.40 \pm 0.40	2.80 \pm 0.00	61.30 \pm 31.30	2.50 \pm 1.30	10.61 \pm 3.10	2.36 \pm 0.76	3.13 \pm 2.58	0.10 \pm 0.09
Lappet-faced Vulture <i>Torgos tracheliotos</i>	1.80 \pm 0.80	1.10 \pm 0.40	2.90 \pm 0.60	0.10 \pm 0.10	2.79 \pm 0.49	0.84 \pm 0.24	0.29 \pm 0.15	0.04 \pm 0.03
White-headed Vulture <i>Trigonoceps occipitalis</i>	4.40 \pm 1.00	1.30 \pm 0.60	1.20 \pm 0.20	0.00 \pm 0.00	2.82 \pm 0.79	0.39 \pm 0.19	0.06 \pm 0.04	0.08 \pm 0.08

* Mali, Burkina Faso and Niger (Thiollay 2006)

[†] Kenya and Uganda (Ogada, Thiollay & Virani unpublished; Pomeroy, Thiollay, Opige & Kaphu unpublished)

Table S4 Median, Q1 and Q3 change rates (from Table S2) projected over three generations. Generation length estimates were provided by BirdLife International (unpublished data).

Species	Annualized			Generation Length (years) †	n‡	Regions¶	Over three generations		
	Median	Upper Q*	Lower Q*				Median	Upper Q	Lower Q
Bearded Vulture <i>Gypaetus barbatus</i>	-2.2%	-1.7%	-4.8%	17.8	3	S,N	-70%	-59%	-93%
Egyptian Vulture <i>Neophron percnopterus</i>	-5.9%	-3.0%	-13.5%	14.0	3	E,W	-92%	-72%	-100%
Hooded Vulture <i>Necrosyrtes monachus</i>	-3.3%	-1.9%	-4.9%	17.8	7	E,W	-83%	-64%	-93%
White-backed Vulture <i>Gyps africanus</i>	-4.1%	-2.5%	-5.4%	18.3	8	S,E,W	-90%	-75%	-95%
Rüppell's Vulture <i>G. rueppellii</i>	-5.8%	-4.8%	-8.4%	18.8	7	E,W	-97%	-94%	-99%
Cape Vulture <i>G. coprotheres</i>	-5.1%	-4.1%	-5.8%	16.0	3	S	-92%	-87%	-94%
Lappet-faced Vulture <i>Torgos tracheliotos</i>	-3.5%	-2.3%	-4.5%	15.0	7	S,E,W	-80%	-65%	-87%
White-headed Vulture <i>Trigonoceps occipitalis</i>	-6.7%	-2.8%	-8.8%	15.0	6	S,E,W	-96%	-73%	-98%

* Quartile values for Bearded, Egyptian and Cape Vulture are based on particularly small samples sizes, and should be treated with caution

† BirdLife International, unpublished data

‡ Number of studies providing estimates of population change

¶ Regions from which percentage change estimates were obtained: S=Southern, W=West, E=East, N=North Africa

Table S5 Sources used to estimate the impact of four major threats to vultures.

Threat	Region	Countries affected	Evidence			Sources
			Quantitative/ qualitative	Type	Measure/ scale	
Poisoning and persecution	East	Kenya	Quantitative	Poisoning	Dead birds counted (c. 377)*	Mijele 2009, Ogada 2011, Thomsett 2011, Kendall & Virani 2012
		Tanzania	Quantitative	Poisoning	Dead birds counted (c. 36)*	N. Baker pers. comm., S. Dolrenry pers. comm.
		Uganda	Quantitative	Poisoning	Dead birds counted (c. 16)*	Omoya & Plumptre 2011
		Ethiopia	Quantitative	Poisoning	Dead birds counted (c. 30)*	Angelov 2010
	North	Canary Islands	Quantitative	Poisoning	Blood lead levels	Gangoso <i>et al.</i> 2009
		Sudan	Qualitative	Poisoning		Wilson 1982
		Egypt	Qualitative	Poisoning		Mullié & Meininger 1985
		Morocco	Qualitative	Poisoning		Thevenot <i>et al.</i> 1985, Mundy 2000
		Libya	Qualitative	Shooting		Mundy 2000 <i>in litt.</i>
	Southern	Zimbabwe	Quantitative	Poisoning	Dead birds counted (c. 718)*	Morris & Mundy 1981, Mundy <i>et al.</i> 1992, Zimbabwe Parks & Wildlife 2013, AEP 2014, Fields 2014
		Namibia	Quantitative	Poisoning	Dead birds counted (c. 1178)*	Ledger 1980, Simmons 1995, Herholdt 1998 <i>in litt.</i> , Bridgeford 2001, 2002, IUCN 2013, T. Snow unpub. data
		Botswana	Quantitative	Poisoning	Dead birds counted (c. 745)*	Borello 1985, BirdLife Botswana 2008, 2010, 2011, Apps & McNutt 2009, McNutt <i>et al.</i> 2014, Bradley & Maude 2014
		Malawi	Quantitative	Poisoning	Dead birds counts (c. 12)*	Roxburgh & McDougall 2012

Threat	Region	Countries affected	Evidence			Sources
			Quantitative/ qualitative	Type	Measure/ scale	
Poisoning and persecution	Southern	Zambia	Quantitative	Poisoning	Dead birds counted (n=484)*	Roxburgh & McDougall 2012, Sichone 2014
		Mozambique	Quantitative	Poisoning	Dead birds counted (c. 154)*	A. Botha pers. comm.
		South Africa	Quantitative	Poisoning	Dead birds counted (c. 1024)*	Boshoff & Vernon 1980, Smit 1984, Van Jaarsveld 1986, Basson 1987, Butchart 1987, Boshoff 1991, Brown 1991, Colahan 1991, Mundy <i>et al.</i> 1992, Anderson 1993, 1995, Snyman 2000, A. Botha pers. comm., T. Snow unpub. data
		Swaziland	Quantitative	Poisoning	Dead birds counted (n=5)*	Verdoorn 2004
	West	Cape Verde	Quantitative	Poisoning	Dead birds counted (n=2) *	Hille & Collar 2011
		DRC	Quantitative	Poisoning	Dead birds counted (n=10)*	ACF 2014
		Burkina Faso, Mali, Niger	Qualitative	Poisoning	Frequent poisoned-baiting of predators (strychnine)	Rondeau & Thiollay 2004, Thiollay 2006
		Cameroon	Qualitative	Poisoning	Vultures killed by poachers	Buij & Croes 2014
Killing for food	West	Ghana	Quantitative	Killing for sale	Arrested killing vultures (n=42)*	Ghana News 2004, 2005
		Nigeria	Quantitative	Killing for sale or home use	Birds in bag and harvesting at slaughterhouses (n=33)*	Tende & Ottosson 2008, Larsen 2009, The Advocate 2012
		Nigeria	Quantitative	Market sales	Traders selling parts for food (n = 28; 25% of traders)*	Saidu & Buij 2013
		Niger, Benin, Cameroon, Nigeria, Ivory Coast	Qualitative	Killing for sale		Elgood <i>et al.</i> 1994, Rondeau & Thiollay 2004, Thiollay 2006, Ogada & Buij 2011, Buij & Croes 2014.
Trade in traditional medicine	East	Tanzania	Quantitative	Killing for sale	Dead vultures counted missing heads (c. 500)*	Ogada 2012
	North	Morocco	Qualitative	Killing for sale		Thevenot <i>et al.</i> 1985

Threat	Region	Countries affected	Evidence			Sources
			Quantitative/ qualitative	Type	Measure/ scale	
Trade in traditional medicine	Southern	South Africa	Quantitative	Estimate based on market surveys	160 vultures sold per annum	Mander <i>et al.</i> 2007
		South Africa	Quantitative	Estimate based on market surveys	203 vultures sold per annum	McKean <i>et al.</i> 2013
		South Africa	Quantitative	Killing for sale	Dead vultures counted missing heads (c. 132)*	Van Jaarsveld 1986, Govendor 2002, Verdoorn 2004, A. Botha pers. comm.
		Lesotho	Quantitative	Estimate based on market surveys	Minimum of 35 Cape vultures sold per annum	Beilis & Esterhuizen 2005
		Zambia	Quantitative	Killing for sale	Dead vultures counted missing heads (c. 36)*	Roxburgh & McDougall 2012
		Zimbabwe	Quantitative	Killing for sale	Dead vultures counted missing heads (c. 248)*	Morris & Mundy 1981, Mundy <i>et al.</i> 1992, Groom <i>et al.</i> 2013
		Mozambique	Quantitative	Estimate based on market surveys	20 vultures sold per annum	McKean <i>et al.</i> 2013
		Namibia	Quantitative	Killing for use	Vulture parts obtained by traditional healers (n=11)*	Hengari <i>et al.</i> 2004
		South Africa, Swaziland	Qualitative	On sale in market	Vulture parts for sale	Cunningham 1990
	West	Benin, Burkina Faso, Cameroon, Equatorial Guinea, Gabon, Ghana, Ivory Coast, Mali, Nigeria, Niger, Togo	Quantitative	On sale in market	Whole vultures or their parts (n=660, comprising 6 species)*	Nikolaus 2001, 2011; Buij, Nikolaus, Whytock & Ingram unpub. data
		Nigeria	Quantitative	On sale in market	Whole vultures or their parts (n=566, comprising 3 species)*	Cook & Mundy 1980, Adeola 1992, Sodeinde & Soewu 1999, Soewu 2008, Saidu & Buij 2013
		Nigeria	Quantitative	Estimate based on market surveys	>1500 vultures traded per annum	Ayowemi 2014
		Sierra Leone	Quantitative	Estimate based on market survey	Relatively low demand compared to Nigeria	Ayowemi 2014

Threat	Region	Countries affected	Evidence			Sources
			Quantitative/ qualitative	Type	Measure/ scale	
Trade in traditional medicine	West	Ivory Coast	Quantitative	On sale in market	Vulture heads (n = 3)*	Cunningham 1990, Williams <i>et al.</i> 2013
		Cameroon, Benin	Quantitative	On sale in market	Skins of two species	Cocker 2000
		Mali	Quantitative	On sale in market	Vulture heads (n = 3)*	Terrasse & Thauront 1988
		Niger	Quantitative	Poacher arrested	Vultures (n=8)*	Dimitrova 2014
		Burkina Faso	Quantitative	Killing for sale	Traders exporting to Nigeria (n=100)*	Nabaloum 2012, Vanguard 2012
		Togo	Quantitative	On sale in market	Vulture head (n=1)*	Styles 2014
Electrical infrastructure	East	Ethiopia	Quantitative	Electrocution	Dead birds counted	Arkumarev <i>et al.</i> 2014 <i>in litt.</i>
		Kenya	Qualitative	Estimate of high risk species	Preliminary risk assessment of existing power lines	Smallie & Virani 2010
	North	Sudan	Quantitative	Electrocution	Dead birds counted (n=77)*	Nikolaus 1984, 2006, Angelov <i>et al.</i> 2013
	Southern	South Africa	Quantitative	Electrocution	Dead birds counted (n=575)*	Markus 1972, Ledger & Annegarn 1981, Anderson & Kruger 1995, Kruger 1999, van Rooyen 2000,
		Lesotho	Quantitative	Collision with wind farms	Accelerated population declines of two species based on Population Viability Models	Rushworth & Krüger 2014

*Indicates data included in Figure 4

Table S6 Measures of the degree to which decline estimates exceed the threshold for Critically Endangered (Criterion A4; IUCN 2012), and are likely to be representative of global population trends. Species are ordered by combined score.

Species	Exceeds Threshold*	Range states surveyed†	African range‡	Combined score
Rüppell's Vulture	3	3	3	9
Cape Vulture	3	3	3	9
White-backed Vulture	2	2	3	7
Hooded Vulture	2	2	3	7
White-headed Vulture	2	2	3	7
Lappet-faced Vulture	2	2	2	6
Egyptian Vulture	2	1	1	4
Bearded Vulture	1	1	1	3

* Extent to which decline rates meet or exceed the threshold for Critically Endangered (-80%, projected over three generations). **3**: Median and both quartiles exceed CR threshold; **2**: Median + 1 quartile exceed threshold; **1**: One quartile exceeds threshold, median value falls short.

† The number of range states from which decline estimates were drawn, as a percentage of all range states to which the species is considered 'native'. **3**: Estimates obtained from >20% of range states; **2**: 10-20%; **1**: <10% of range states.

‡ African range as a proportion of global range. **3**: African endemic; **2**: >=50% of global range lies in Africa; **1**: >=50% of global range lies outside of Africa.

List S1 Published sources cited in Tables S1–S6.

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