

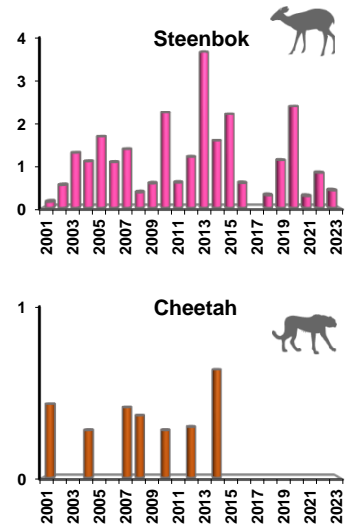
GAME COUNTS IN NORTH-WEST NAMIBIA

Palmwag and Etendeka Concessions

May 2023

Total number of animals seen each year

Species	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Baboon				3	66		95		28	37	32	54	70	23	24	27	8	104	10		11	29	19
Cheetah	3			2			3	3				2		4									
Eland														3						12			
Elephant	3		19	7	16		3	9	15	1	17	23	20	15	28	2	6		42	3	27	15	
Gemsbok	368	825	452	756	575	620	505	595	719	728	587	503	370	394	290	675	126	171	98	130	61	51	16
Giraffe	71	71	69	62	88	75	80	93	99	193	111	76	61	63	50	164	42	107	86	55	79	40	10
Hyaena	1						1				6	1			5	2	5	2	2	1	1		
Jackal	9	14	6	11	11	26	13	5	21	34	7	20	18	16	25	17	9	9	10	11	6	7	1
Klipspringer					2	2				2	1		1			2						3	
Kudu	51	70	3	43	68	75	204	13	65	53	40	24	39	24	38	78	15	13	4	7	1	2	2
Ostrich	83	56	82	54	108	29	98	70	154	41	33	73	93	77	67	42	37	24	76	41	11	25	23
Springbok	3,822	3,248	2,933	3,241	1,550	2,421	1,819	1,553	3,349	2,730	2,067	1,747	1,149	2,435	448	3,487	515	859	545	1,002	464	380	154
Steenbok	1	4	9	8	12	7	10	3	4	16	4	8	24	10	15	4		2	8	17	2	6	3
H. Zebra	567	744	629	631	728	777	621	1,054	1,623	1,152	1,845	1,122	1,016	1,253	770	602	279	266	107	146	237	64	62

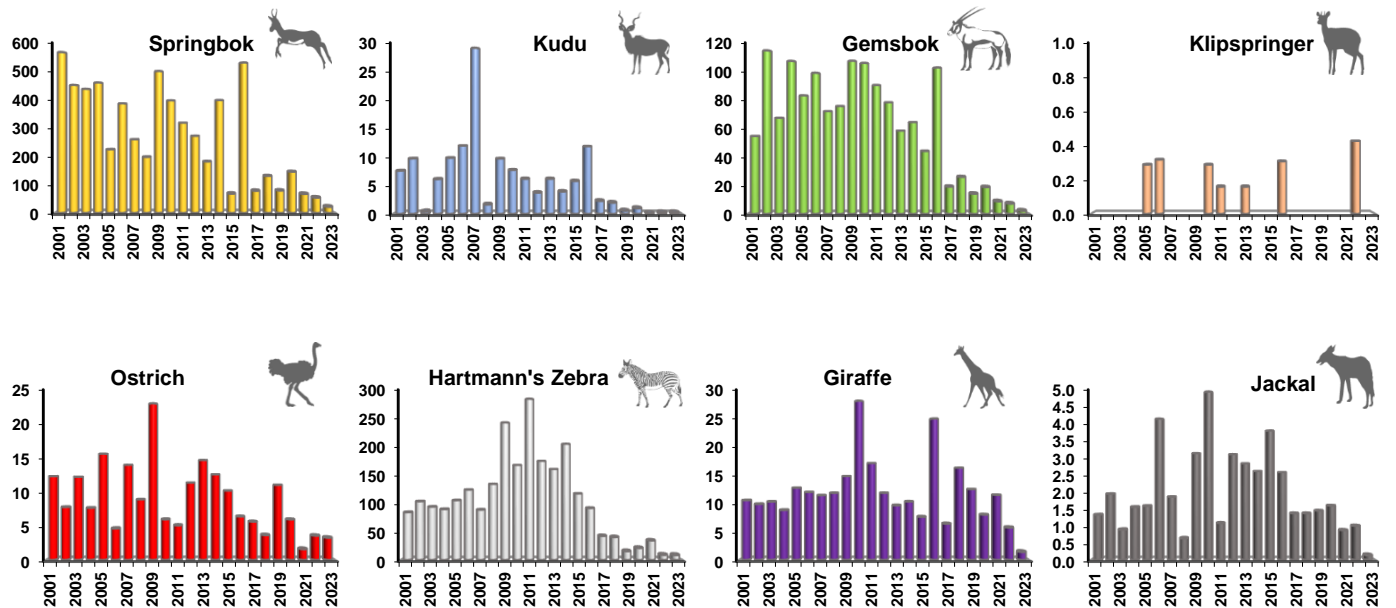


Total Population Estimates

Species	Population estimate	Lower 95% CL	Upper 95% CL
Gemsbok (U)	158	59	423
Kudu (HN)	35	6	220
Ostrich (U)	269	102	711
Springbok (HN)	2,632	1,315	5,268
Steenbok (HN)	164	45	596
Hartmann's Zebra (HN)	73	23	230

All above estimates are derived using DISTANCE analysis. This takes account of drop off in detection with distance from the transect line. They are conservative estimates as 43% of the count area is not sampled (due to inaccessibility) and is consequently assumed to hold no animals. Model selection: U = uniform key; HN = half normal

Trends- Number of animals per 100km



Animals seen during this count and minimum estimates

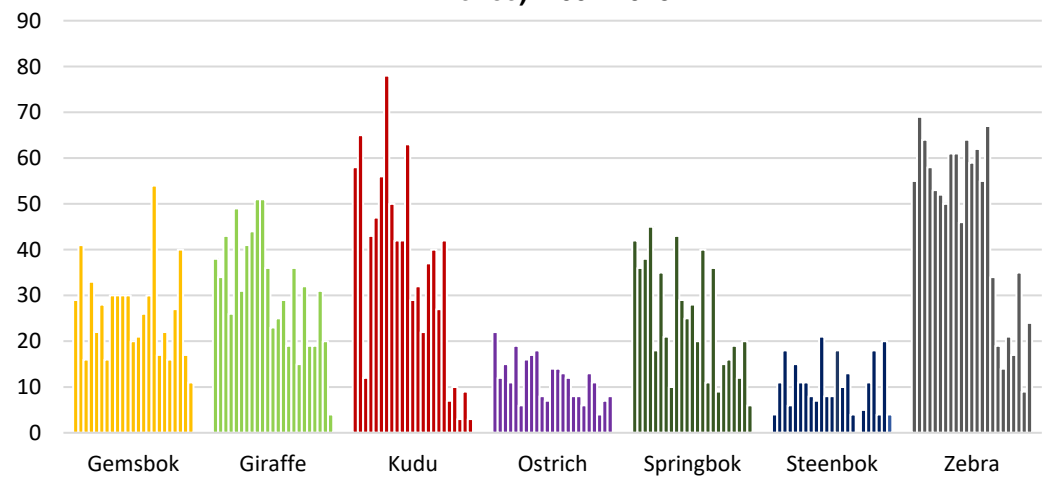
	Total	Etendeka	Palmwag
Total Route km	698	121	577
Total area (km2)	6,524	633	5,891
Number of routes	14	3	11
% area excluded	43	44	43

Species	Etendeka	Palmwag
Gemsbok	9 (26)	7 (54)
Giraffe	2 (4)	8 (16)
Kudu	2 (6)	
Ostrich		23 (156)
Springbok	26 (87)	128 (666)
Steenbok		3 (14)
Hartmann's Zebra	62 (182)	

Values without brackets are numbers of animals seen along transects. Values inside brackets are minimum estimates assuming all animals within 500m on each side of the transect line are detected i.e. there is no adjustment for drop off in detection with distance from the transect line. In addition, for springbok, gemsbok and giraffe, large groups were excluded from extrapolations and added afterwards.

The sum of these values will be significantly lower than the totals indicated in the top left table as the total estimates take account of species detection curves.

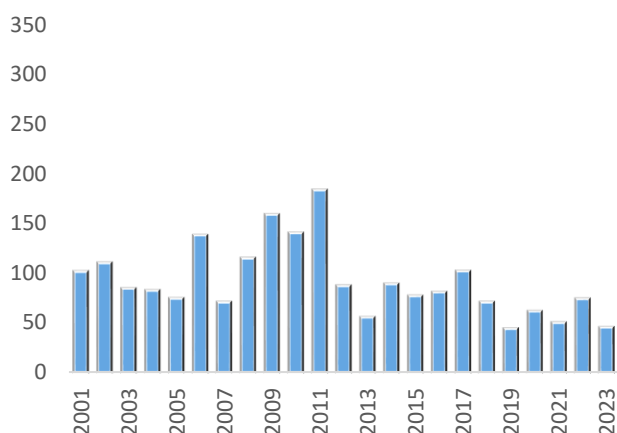
Percentage of all animals counted in the NW (north of the vet fence): 2001-2023



The Palmwag and Etendeka concession areas are important refuges for at least five of the main game species. Spikes suggest movements of animals into the concessions from conservancies or the Skeleton Coast Park, while troughs point to losses, either from outward movements or a general reduction in numbers. Since around 2017 there has been a downward trend in numbers seen for most of the main game species in these concession areas, and (with the exception of steenbok) a corresponding drop in the proportion of 'north-west' animals found in them.

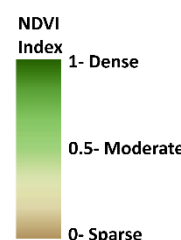
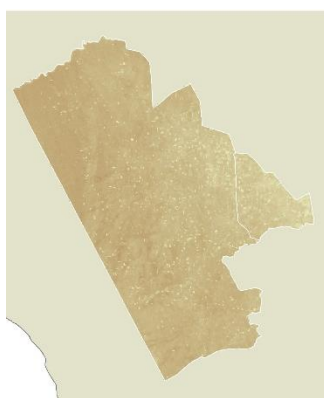
Rainfall

Average rainfall (mm)

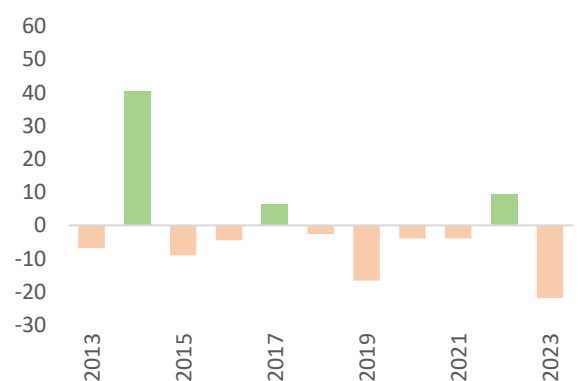


The rainfall season is from July to June and values are an average for the whole area.

Vegetation



NDVI - percentage difference from long term mean



NDVI is a measure of the density of chlorophyll in vegetation cover. It can be used as an indicator of the amount of biomass available to wildlife. The map shows the NDVI status in the current year (Feb-Apr) and the trend indicates the average deviation of the concession areas from the long-term mean, in each year.