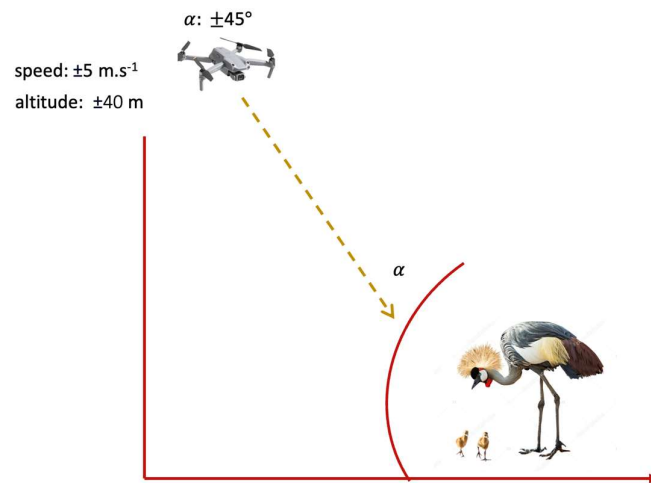


# Figures



Supplementary Figure 1: Schematic representation of the general drone approach manoeuvre for monitoring Grey Crowned Crane nest sites and families.



Supplementary Figure 2: Evidence of a bird of prey (Yellow-billed Kite, *Milvus aegyptius*) at an active Grey Crowned Crane nest site.

# TABLES

Supplementary Table 1: Breeding and rainfall data (Oct 2022 - May 2023) for five Grey Crowned Crane breeding regions

Region	Number of nest sites	Observations* per nest site	Total annual rainfall (mm)	Rainfall intensity* (mm.day <sup>-1</sup> )
Franklin	8	3.38 (2.31, 4.92)	906	2.88 (2.52, 3.28) <sup>ab</sup>
Himeville	19	4.11 (3.29, 5.13)	1 192	3.54 (3.14, 3.98) <sup>a</sup>
Kokstad	36	3.35 (2.81, 4.00)	697	2.73 (2.38, 3.11) <sup>b</sup>
Underberg West	24	4.08 (3.35, 4.98)	1 054	3.19 (2.80, 3.62) <sup>ab</sup>
Underberg East	8	3.62 (2.52, 5.22)	1 077	3.21 (2.82, 3.64) <sup>ab</sup>

\*measured over rolling 10-day periods. Shared letters indicate no difference in mean rainfall intensity between regions. Numbers in parentheses indicate (lower confidence limit, upper confidence limit).

Supplementary Table 2: Model fitting and model averaging results of logistic regression models for Grey Crowned Crane hatching and overall success across several environmental correlates

	Model	df	Log(L)	AICc	ΔAICc	Weight
Hatching success	natural_grassland+dam_area+buildings+dirt_road	5	-55.5	121.8	0	0.18
	natural_grassland+buildings+dirt_road	4	-57.2	122.7	0.99	0.11
	natural_grassland+dam_area+buildings	4	-57.2	122.8	1.09	0.104
	natural_grassland+buildings	3	-58.5	123.2	1.47	0.086
	natural_grassland+dam_area+buildings+dirt_road+open_water	6	-55.1	123.2	1.47	0.086
	pasture+natural_grassland+dam_area+buildings+dirt_road	6	-55.2	123.4	1.67	0.078
	natural_grassland+dam_area+buildings+dirt_road+river	6	-55.2	123.4	1.67	0.078
	natural_grassland+dam_area+wetland_area+buildings+dirt_road	6	-55.3	123.5	1.73	0.076
	natural_grassland+buildings+dirt_road+open_water	5	-56.5	123.7	1.92	0.069
	natural_grassland+dam_area+dirt_road	4	-57.6	123.7	1.95	0.068
	crops+natural_grassland+dam_area+buildings+dirt_road	6	-55.4	123.8	2	0.066
Overall success	natural_grassland+dam_area+buildings+	4	-56.2	120.9	0	0.234
	natural_grassland+dam_area+buildings+farm_road+	5	-55.8	122.2	1.26	0.125
	natural_grassland+dam_area+buildings+dirt_road+	5	-55.8	122.3	1.38	0.117
	crops+natural_grassland+dam_area+buildings+	5	-55.8	122.3	1.38	0.117
	natural_grassland+dam_area+buildings+open_water+	5	-55.9	122.4	1.48	0.112
	dam_area+buildings+	3	-58.2	122.6	1.66	0.102
	natural_grassland+dam_area+buildings+river+	5	-56	122.7	1.76	0.097
natural_grassland+dam_area+wetland_area+buildings+	5	-56	122.7	1.79	0.096	