

Ecography

**ECOG-02549**

Mograbi, P. J., Asner, G. P., Witkowski, E. T. F., Erasmus, B. F. N., Wessels, K. J., Mathieu, R. and Vaughn, N. R. 2016. Humans and elephants as treefall drivers in African savannas. – *Ecography* doi: 10.1111/ecog.02549

**Supplementary material**

## Appendix 1

Table A1. Model selection and averaging results of treefall occurrence in sites containing elephants (Reserve<sub>e</sub>), humans (Communal land<sub>A</sub> and Communal land<sub>B</sub>), or neither (Reserve<sub>0</sub>), in relation to various abiotic factors. Models with AIC differences ( $\Delta_i$ )  $\leq 2$  are ranked in order of increasing  $\Delta_i$  with Model 1 as the best-fit logistic regression. Variables included in each model have their p-value recorded. Blank cells indicate those variables were not included in the model. Odds ratios of the categorical variables (Site, Geology and Catena) are calculated relative to a base level (Reserve<sub>0</sub>, Gabbro and Lowlands, respectively).

Variables	Logistic regression models				Model averaging <sup>**</sup>	
	1	2	3	4	$p_{ip}$	$\omega_{ip}$
Site: Communal land <sub>A</sub>	0.069	0.045	0.063	0.071	0.063	1.00
Site: Reserve <sub>e</sub>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Site: Communal land <sub>B</sub>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
Burns 2 yr	0.054	0.030	0.065	0.056	0.052	1.00
Geology: Granite	0.009	0.007	0.008	0.010	0.008	1.00
Burns 2 yr $\times$ Geology	0.011	0.009	0.09	0.011	0.010	1.00
Old burns		0.285			0.286	0.25
2010 Height			0.362		0.362	0.21
Catena: Uplands				0.970	0.970	0.14
df	7	8	8	8		
$\Delta_i$	0.00	0.84	1.18	2.00		
$\omega_i^*$	0.20	0.13	0.11	0.08		

\* Akaike weights ( $\omega_i$ ) represent normalized model likelihood values where  $\omega_i$  can be treated as a probability that model  $i$  is the best model for these data (Burnham and Anderson 2004).

\*\* Model averaging relative p values ( $p_{ip}$ ) and relative weights ( $\omega_{ip}$ ) are with respect to the global model and indicate the relative importance of each variable. Variables are ranked in decreasing  $\omega_{ip}$ .

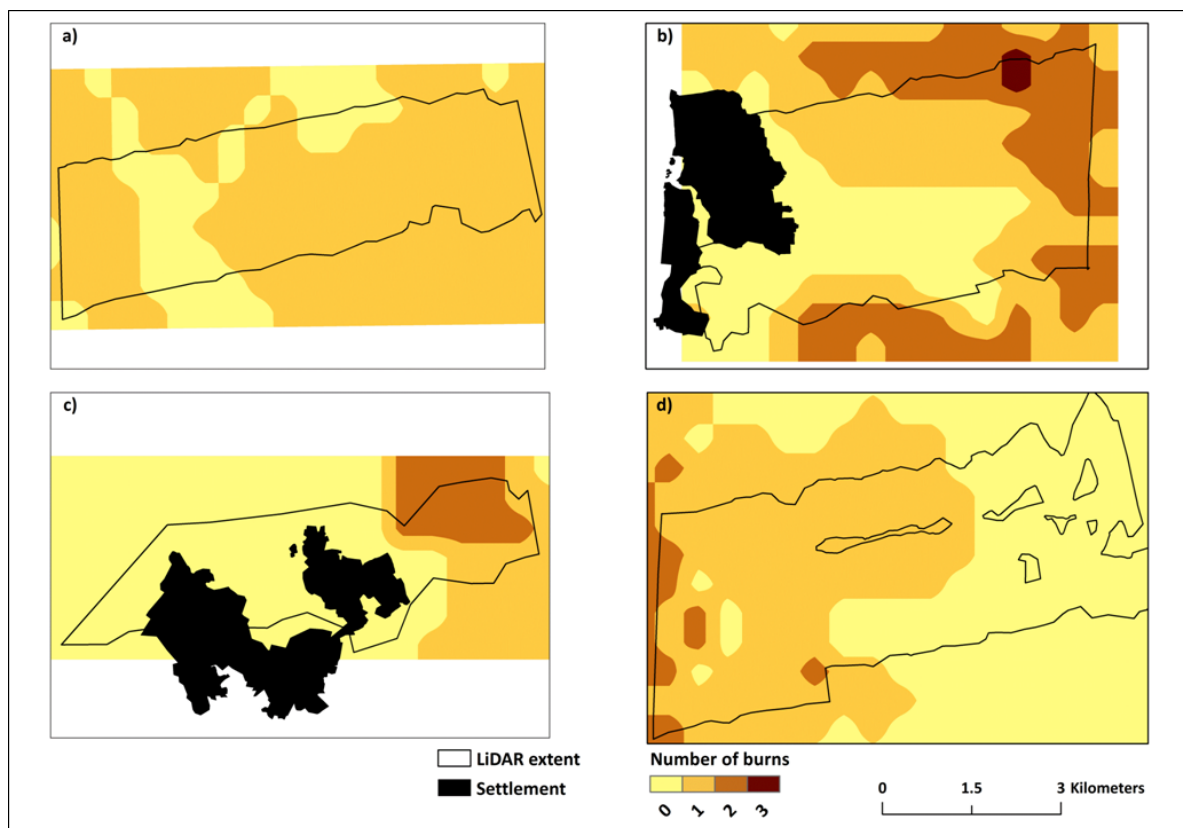


Figure A1. Number of burns between 2010 and 2012 for a) Reserve<sub>0</sub>, b) Communal land<sub>A</sub>, c) Communal land<sub>B</sub>, and d) Reserve<sub>e</sub>.

## Supplementary Material References

Burnham, K. P. and Anderson, R. P. 2004. Multimodel inference: understanding AIC and BIC in model selection. - *Sociol. Methods Res.* 33: 261–304.