

Appendix A Sensitivity analysis

A.1 Resistance ranks

For the sensitivity analysis we used different ranks on the resistance, table [A1](#).

Table A1 Resistances values used in the different sensitivity scenarios

M0, M1, M2	Equidistant scenario	Compressed scenario
1	1	400
5	334	600
10	667	800
20	1000	1000
100	1333	1200
500	1666	1400
2000	2000	1600

We calculated the correlation with the connectivity maps obtained through the 'M2' models to the ones obtained with those two scenarios, table [A2](#)

Table A2 Correlation between the 'M2' connectivity maps and the connectivity maps in the sensitivity scenarios

Correlation with M2 connectivity maps	Dry	Wet
Compressed scenario	0.97	0.97
Equidistant scenario	0.97	0.98

A.2 Habitat patches size

We tried two different minimal habitat patch sizes (10 and 100 ha) to ensure the patch size was not changing the IF patterns. We used the 'M2' model during wet season to compare (which used 30 ha as patch size). And we calculated the correlation with the connectivity maps obtained through the 'M2' model to the ones obtained with those two scenarios, table [A3](#).

Table A3 Correlation between the 'M2' wet season connectivity map and patch sizes sensitivity scenarios

	Correlation with 'M2' wet season
10 ha patch size :	0.995
100 ha patch size:	0.999

A.3 Dispersal distance

The Interaction Flux metric is dependent on the median and maximum dispersal distance and the modeled graph is using a maximum cost threshold relying on maximum

dispersal distance. We thus tried different maximum and median dispersal distances (with 25% variation) to ensure the dispersal distance was not changing the IF patterns too much: with + 25 %, median dispersal: 126 km and maximal dispersal distance: 719 km; with -25 %, median dispersal: 76 km and maximal dispersal distance: 432 km. We used the 'M2' model during wet season to compare (which used 100 km as median dispersal distance and 574 km as maximal dispersal distance). And we calculated the correlation with the connectivity maps obtained through the 'M2' model to the ones obtained with those two scenarios, table [A4](#).

Table A4 Correlation between the 'M2' wet season connectivity map and dispersal distance sensitivity scenarios

	Correlation with 'M2' wet season
-25% dispersal distance:	0.999
+25% dispersal distance:	0.998

Appendix B 'M0' and 'M1' wet seasons maps

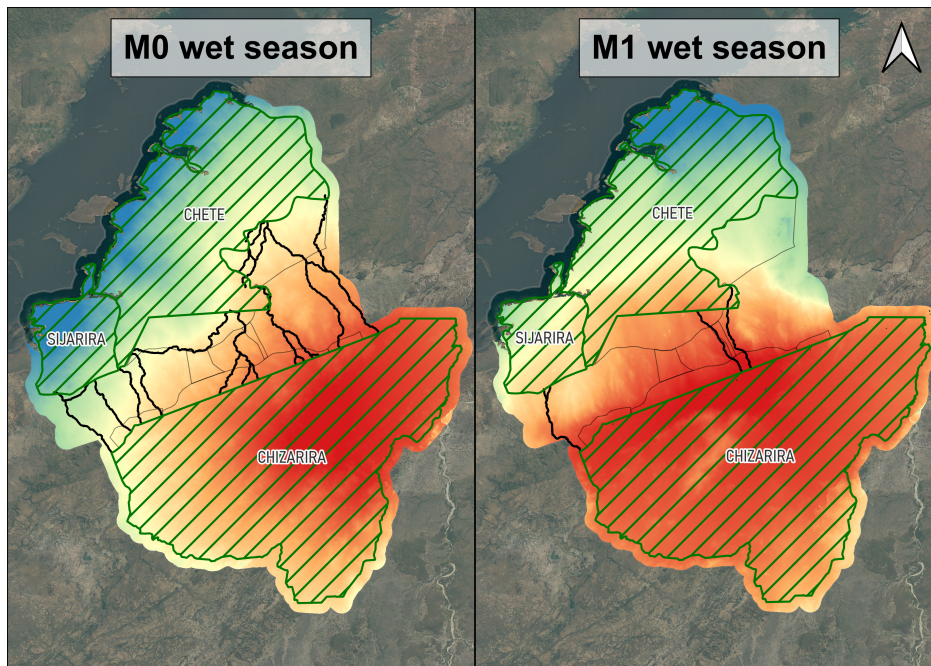


Fig. B1 Connectivity maps of 'M0' and 'M1' models for wet season based on Interaction Flux values and Least Cost Paths. Areas with a high potential connectivity are shown in red, while those with a low probability are in blue.

Appendix C ESA LULC confusion matrix

Table C5 Confusion matrix and associated metrics (Kappa = 0.806, OA = 0.872) of the ESA LULC based on our reference data.

Class	Tree cover	Grassland	Cropland	Bare soil	Water	Rappel
Tree cover	52783	2524	35			0.953
Grassland	438	192				0.305
Cropland	4	7455	18656	14		0.714
Bare soil		2701		136		0.048
Water	60	145		311	21799	0.977
Precision	0.991	0.014	0.998	0.295	1	