Supplementary Material

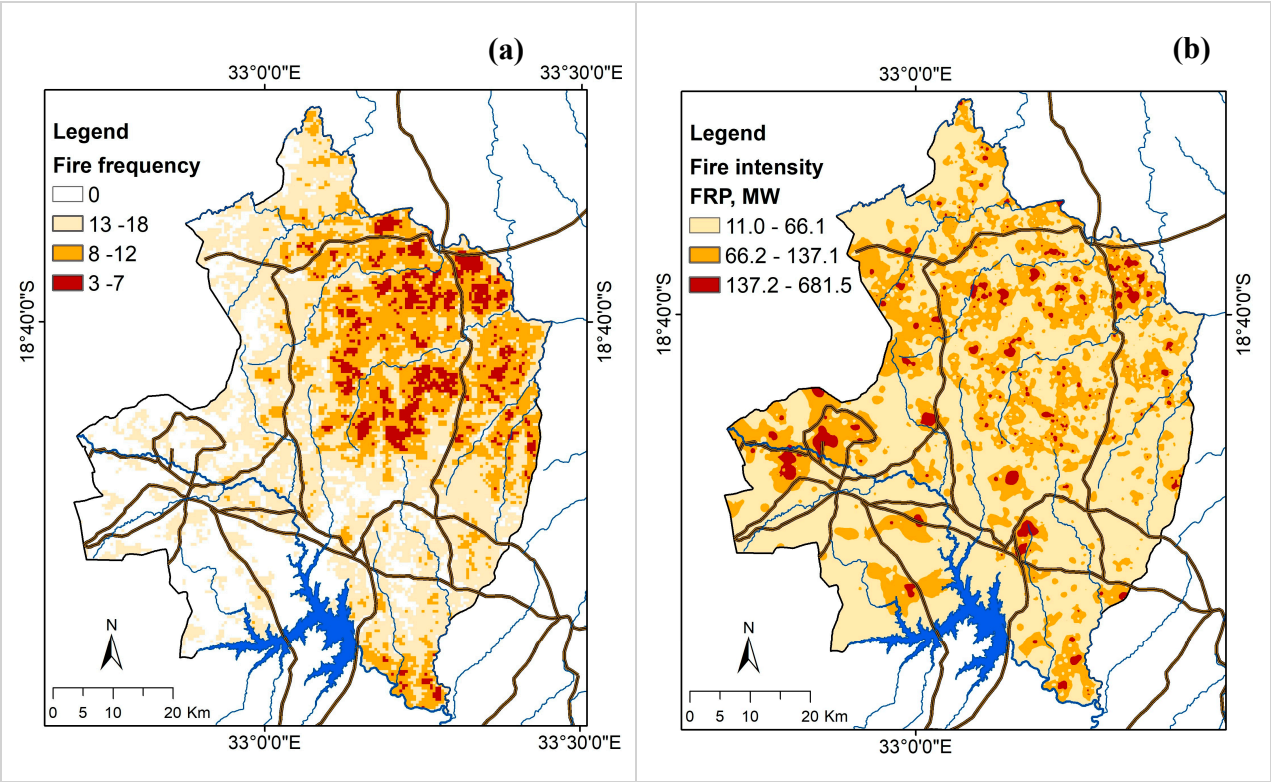

Figure S1. Spatial pattern distribution of fire frequency (a) and fire intensity (b) in the study area. Where: 0 = non-burn, 13-18 = low frequency, 8-12 = intermediate frequency, 3-7 = high frequency; 11-66.1 = low intensity, 66.2-137.1 = intermediate intensity, 137.2-681.5 = high intensity

Table S1. Asymptotic diversity estimates along with related statistics

Site	Diversity	Observed	Estimator	s.e.	LCL	UCL
HfHi	Species richness	48.0	53.3	4.9	49.1	72.9
HfHi	Shannon diversity	16.5	17.0	0.7	16.5	18.4
HfHi	Simpson diversity	8.4	8.5	0.5	8.4	9.4
HfLi	Species richness	59.0	67.0	6.0	61.1	88.8
HfLi	Shannon diversity	26.8	28.0	1.1	26.8	30.1
HfLi	Simpson diversity	17.6	18.0	0.9	17.6	19.8
Ifii	Species richness	56.0	66.9	7.6	59.2	93.4
Ifii	Shannon diversity	30.8	34.7	2.3	30.8	39.2
Ifii	Simpson diversity	19.4	20.6	1.8	19.4	24.2
LfHi	Species richness	50.0	50.6	1.0	50.1	55.9
LfHi	Shannon diversity	21.3	21.8	0.8	21.3	23.5
LfHi	Simpson diversity	11.1	11.2	0.7	11.1	12.7
LfLi	Species richness	65.0	69.9	4.8	66.0	89.7
LfLi	Shannon diversity	21.1	21.4	0.6	21.1	22.7
LfLi	Simpson diversity	10.1	10.2	0.5	10.1	11.1

Table S2. Diversity estimates with rarefied and extrapolated samples

HfHi

	m	method	order	qD	qD.LCL	qD.UCL	SC	SC.LCL	SC.UCL
1	1	interpolated	0	1	1	1	0.118	0.106	0.13
10	495	interpolated	0	41.656	39.322	43.991	0.98	0.975	0.984
20	990	observed	0	48	44.466	51.534	0.992	0.988	0.996
30	1459	extrapolated	0	50.711	45.75	55.671	0.996	0.991	1.001
40	1980	extrapolated	0	52.14	45.31	58.969	0.998	0.994	1.002

HfLi

	m	method	order	qD	qD.LCL	qD.UCL	SC	SC.LCL	SC.UCL
1	1	interpolated	0	1	1	1	0.056	0.049	0.062
10	398	interpolated	0	49.75	46.239	53.262	0.964	0.958	0.971
20	796	observed	0	59	54.066	63.934	0.985	0.977	0.992
30	1173	extrapolated	0	63.064	56.031	70.098	0.993	0.984	1.001
40	1592	extrapolated	0	65.208	55.322	75.094	0.997	0.989	1.004

Ifii

	m	method	order	qD	qD.LCL	qD.UCL	SC	SC.LCL	SC.UCL
1	1	interpolated	0	1	1	1	0.049	0.039	0.058
10	155	interpolated	0	44.891	41.877	47.904	0.886	0.869	0.903
20	311	observed	0	56	51.395	60.605	0.955	0.938	0.972
30	458	extrapolated	0	60.947	54.565	67.329	0.976	0.957	0.995
40	622	extrapolated	0	63.858	55.29	72.426	0.988	0.971	1.004

LfHi

	m	method	order	qD	qD.LCL	qD.UCL	SC	SC.LCL	SC.UCL
1	1	interpolated	0	1	1	1	0.089	0.078	0.1
10	518	interpolated	0	45.809	43.465	48.153	0.984	0.981	0.988
20	1037	observed	0	50	47.058	52.942	0.997	0.994	1
30	1528	extrapolated	0	50.517	46.651	54.383	1	0.997	1.003
40	2074	extrapolated	0	50.559	45.69	55.429	1	0.998	1.002

LfLi

	m	method	order	qD	qD.LCL	qD.UCL	SC	SC.LCL	SC.UCL
1	1	interpolated	0	1	1	1	0.098	0.091	0.105
10	1155	interpolated	0	58.946	55.764	62.127	0.991	0.989	0.992
20	2310	observed	0	65	61.107	68.893	0.997	0.995	0.999
30	3404	extrapolated	0	67.408	62.411	72.405	0.998	0.997	1
40	4620	extrapolated	0	68.724	62.415	75.034	0.999	0.998	1.001

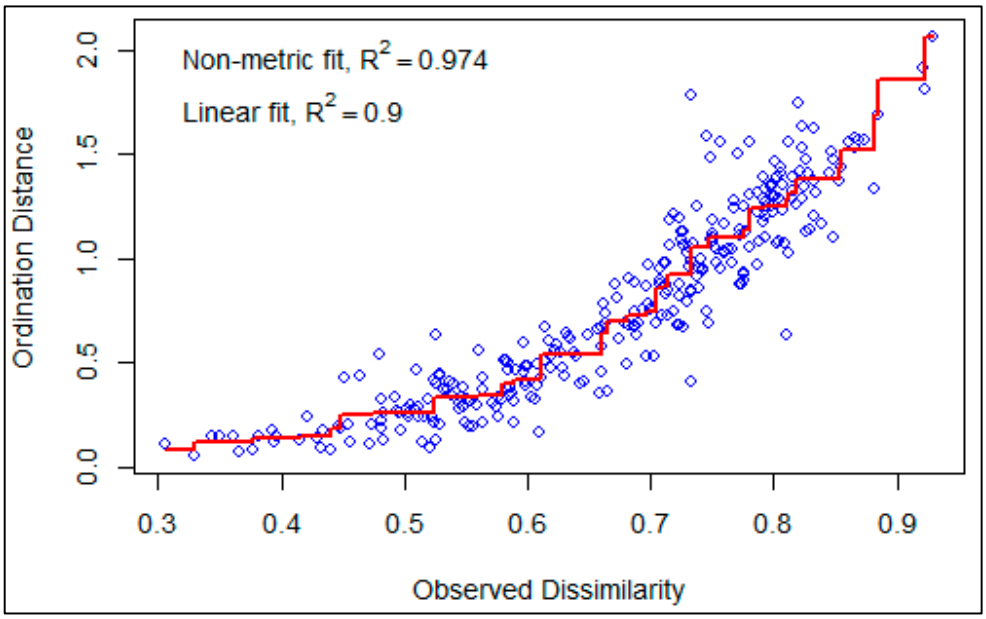

Figure S2. NMDS Stress plot

Table S3. Map accuracy assessment

Error matrix (confusion matrix):

		Classified values					
		Unburned	Burned	Total	User accuracy	Total class area (ha)	Wi
Thematic raster classes	Unburned	301	4	305	0.98689	337701.02483	0.7705
	Burned	17	74	91	0.81319	100589.05431	0.2295
	Total	318	78	396		438290.07914	
Producer accuracy		0.94654	0.94872		0.94697		

Error matrix of estimated area proportion:

		Classified values		
		Unburned	Burned	Wi
Thematic raster classes	Unburned	0.76039	0.0101	0.7705
	Burned	0.04287	0.18663	0.2295
	Total	0.80327	0.19673	

Quadratic error matrix of estimated area proportion:

		Classified values	
		Unburned	Burned
Thematic raster classes	Unburned	3e-05	3e-05
	Burned	9e-05	9e-05
	Total	0.01069	0.01069

Accuracy matrices:

User's accuracy matrix of estimated area proportion:

		Classified values	
		Unburned	Burned
Thematic raster classes	Unburned	0.98689	0.01311
	Burned	0.18681	0.81319

Producer's accuracy matrix of estimated area proportion:

		Classified values	
		Unburned	Burned
Thematic raster classes	Unburned	0.94663	0.05136
	Burned	0.05337	0.94864

Overall Accuracy: 0.94702

Kappa: 0.842

Class area adjusted table:

	Area (ha)	**Error**	**Lower limit**	**Upper limit**
1 Unburned	352063.52072	4683.38548	342884.08519	361242.95626
2 Burned	86226.55841	4683.38548	77047.12288	95405.99395
Total	438290.07914			

Table S4. List of the species

Abbreviation species	Scientific name
Acac.nig	*Acacia nigrecensis*
Acac.sen	*Acacia senegal*
Acacia.sp	*Acacia sp*
Acac.wilk	*Acacia wilkisiana*
Afze.qua	*Afzelia quanzensis*
Albi.adi	*Albizia adianthifolia*

Albi.for	*albizia forbesii*
Albi.glab	*Albizia glaberrima*
Albi.ver	*Albizia versicolor*
Anno.sen	*Annona senegalensis*
Anti.ven	*Antidesma venosum*
Bauh.pet	*Bauhinia petersiana*
Berc.dis	*Berchemia discolor*
Bolu.spe	*Bolusanthus speciosus*
Brach.boe	*Brachystegia boehmii*
Brach.gla	*Brachystegia glaucescens*
Brach.spi	*Brachystegia spiciformis*
Brac.uti	*Brachystegia utilis*
Breo.sal	*Breonadia salicina*
Brid.cat	*Bridelia cathartica*
Brid.mic	*Bridelia micrantha*
Burk.afri	*Burkea africana*
Cass.abb	*Cassia abbreviata*
Comb.api	*Combretum apiculatum*
Comb.coll	*Combretum collinum*
Comb.mol	*Combretum molle*
Comb.pan	*Combretum paniculatum*
Comb.sp	*Combretum sp*
Cord.long	*Cordatum longiculata*
Cros.feb	*Crossopteryx febrifuga*
Cuss.arb	*Cussonia arborea*
Dalb.mel	*Dalbergia melanoxylon*
Dich.cin	*Dichrostachys cinerea*
Dios.kir	*Diospyros kirkii*
Dios.lyc	*Diospyros lycioides*
Dios.squ	*Diospyros squarrosa*
Dios.usa	*Diospyros usambarensis*
Dipl.cond	*Diplorhynchus condylocarpon*
Ehre.amo	*Ehretia amoena*
Elep.goe	*Elephantorrhiza goetz*
Eryt.afr	*Erythrophleum africanum*
Faur.roc	*Faurea rochetiana*
Flac.ind	*Flacourtia indica*
Gard.sp	*Gardenia sp*
Gard.vulk	*Gardenia vulkens*
Grew.fla	*Grewia flavescens*
Gymn.het	*Gymnosporia heterophylla*
Hola.pub	*Holarrhena pubescens*
Hyme.aci	*Hymenocardia acida*
Hype.micr	*Hyperacanthus microphyllus*

Julb.glo	*Julbernardia globiflora*
Lannea.discolor	*Lannea discolor*
Lann.sch	*Lannea schweinfurthii*
Lann.stu	*Lannea stuhlmannii*
Marg.dis	*Margaritaria discoidea*
Mark.obt	*Markhamia obtusifolia*
Mill.stu	*Millettia stuhlmannii*
Mond.ser	*Monduleia sericea*
Mono.eng	*Monotes glaber*
Ochn.lep	*Ochna leptoclada*
Ochn.nat	*Ochna natalitia*
Olax.dis	*Olax dissitiflora*
Oogo.ori	*Oogonia orientalis*
Oogo.sp	*Oogonia sp*
Ormo.tri	*Ormocarpum trichocarpum*
Ozor.obo	*Ozoroa obovata*
Pari.cur	*Parinari curatellifolia*
Peri.ang	*Pericopsis angolensis*
Phil.mic	*Philantus micranta*
Phil.vio	*Philenoptera violacea*
Pili.tho	*Piliostigma thonningii*
Podr.bry	*Podranea brycei*
Protea.sp	*Protea sp*
Pseu.map	*Pseudolachnostylis maprouneifolia*
Psice.esp	*Psicero espermum*
Ptel.myr	*Pteleopsis myrtifolia*
Pter.ang	*Pterocarpus angolensis*
Pter.rot	*Pterocarpus rotundifolius*
Rhigosum.sp	*Rhigosum sp*
Rure.ori	*Rureira orientalis*
Allo.afr	*Allophylus africanus*
Schr.ala	*Schrebera alata*
Scle.bir	*Sclerocarya birrea*
Secu.long	*Securidaca longipedunculata*
Ster.pen	*Sterculia pendicula*
Stry.ara	*Strychnos aralacea*
Stry.mad	*Strychnos madagascariensis*
Stry.spi	*Strychnos spinosa*
Swar.mad	*Swartzia madagascariensis*
Syzy.cor	*Syzygium cordatum*
Tabe.ele	*Tabernaemontana elegans*
Term.brac	*Terminalia brachystemma*
Term.ser	*Terminalia sericea*

Thes.gar	*Thespesia garckeana*
Trem.ori	*Trema orientalis*
Uapa.kir	*Uapaca kirkiana*
Uvaria.sp	*Uvaria sp*
Vach.nig	*Vachellia nigrescens*
Vach.sen	*Vachellia senegal*
Vang.ran	*Vangueira randii*
Vaxe.rob	*Vaxelia robusta*
Vaxelia.sp	*Vaxelia sp*
Vern.col	*Vernonia colorata*
Vite.don	*Vitex doniana*
Vite.pay	*Vitex payvos*
Vitex.sp	*Vitex sp*
Xero.stu	*Xeroderis stuhlmannii*
Xime.am	*Ximenia americana*
Zizi.aby	*Ziziphus abyssinica*
Zizi.sp	*Ziziphus sp*