

## ***Supplementary Material***

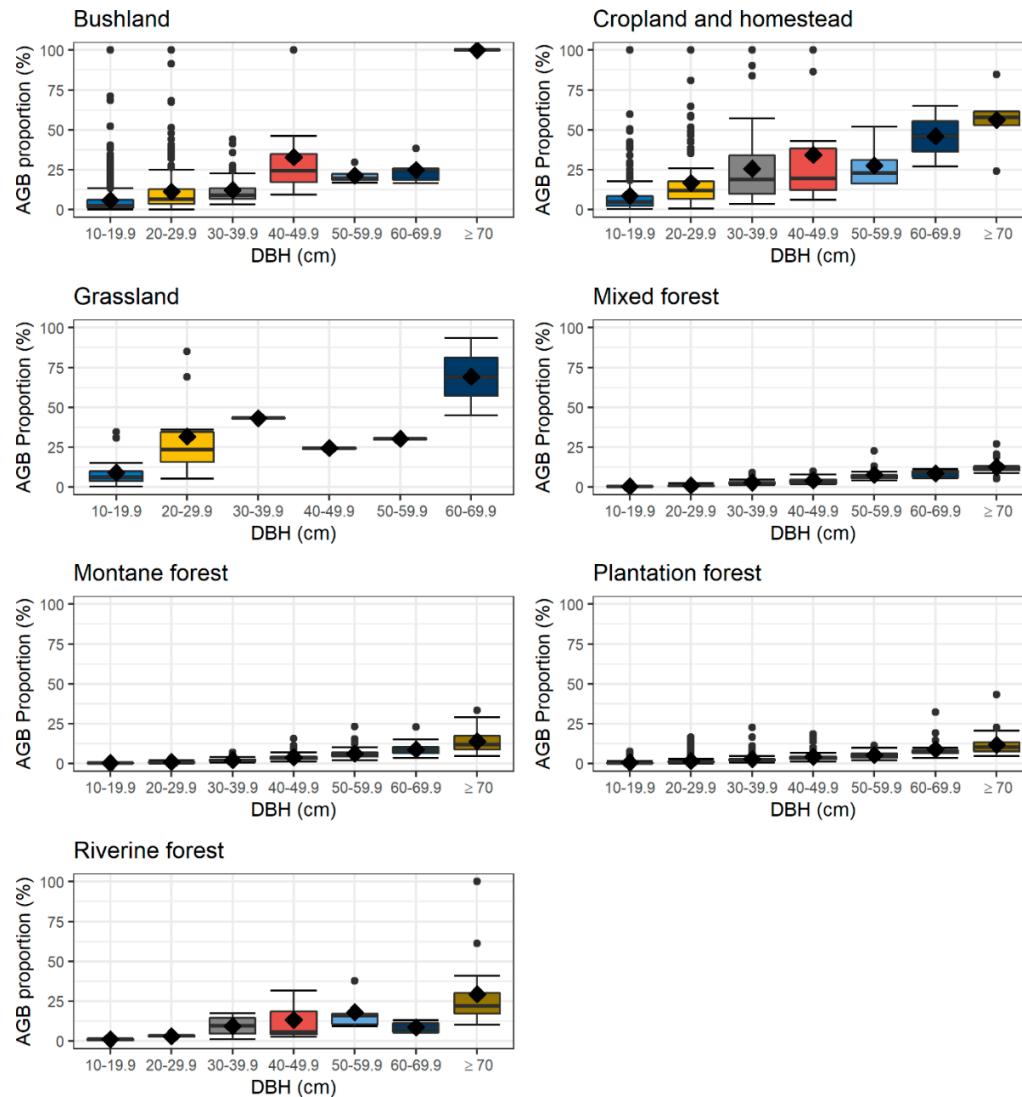
**Supplementary Table S1.** Most common tree species in different land cover (LC) types and DBH classes.

LC type	DBH class (cm)						
	10–19.9	20–29.9	30–39.9	40–49.9	50–59.9	60–69.9	≥ 70
Bushland	<i>Acacia mearnsii</i>	<i>Acacia mearnsii</i>	<i>Albizia amara</i>	<i>Albizia amara</i>	<i>Commiphora africana</i>	<i>Albizia amara</i>	<i>Newtonia hildebrandtii</i>
	<i>Commiphora schimperi</i>	<i>Albizia amara</i>	<i>Agauria salicifolia</i>	<i>Euphorbia kibwezensis</i>	<i>Albizia amara</i>	<i>Acacia mearnsii</i>	
	<i>Acacia tortilis</i>	<i>Commiphora africana</i>	<i>Acacia mearnsii</i>	<i>Acacia mearnsii</i>	<i>Erythrina abyssinica</i>	<i>Agauria salicifolia</i>	
	<i>Xymalos monospora</i>	<i>Maesa lanceolata</i>	<i>Mangifera indica</i>	<i>Eucalyptus sp.</i>		<i>Euphorbia kibwezensis</i>	
	<i>Commiphora africana</i>	<i>Acacia reficiens</i>	<i>Commiphora incisa</i>	<i>Mangifera indica</i>		<i>Erythrina abyssinica</i>	
Cropland and homestead	<i>Acacia mearnsii</i>	<i>Grevillea robusta</i>	<i>Grevillea robusta</i>	<i>Grevillea robusta</i>	<i>Grevillea robusta</i>	<i>Eucalyptus sp.</i>	<i>Mangifera indica</i>

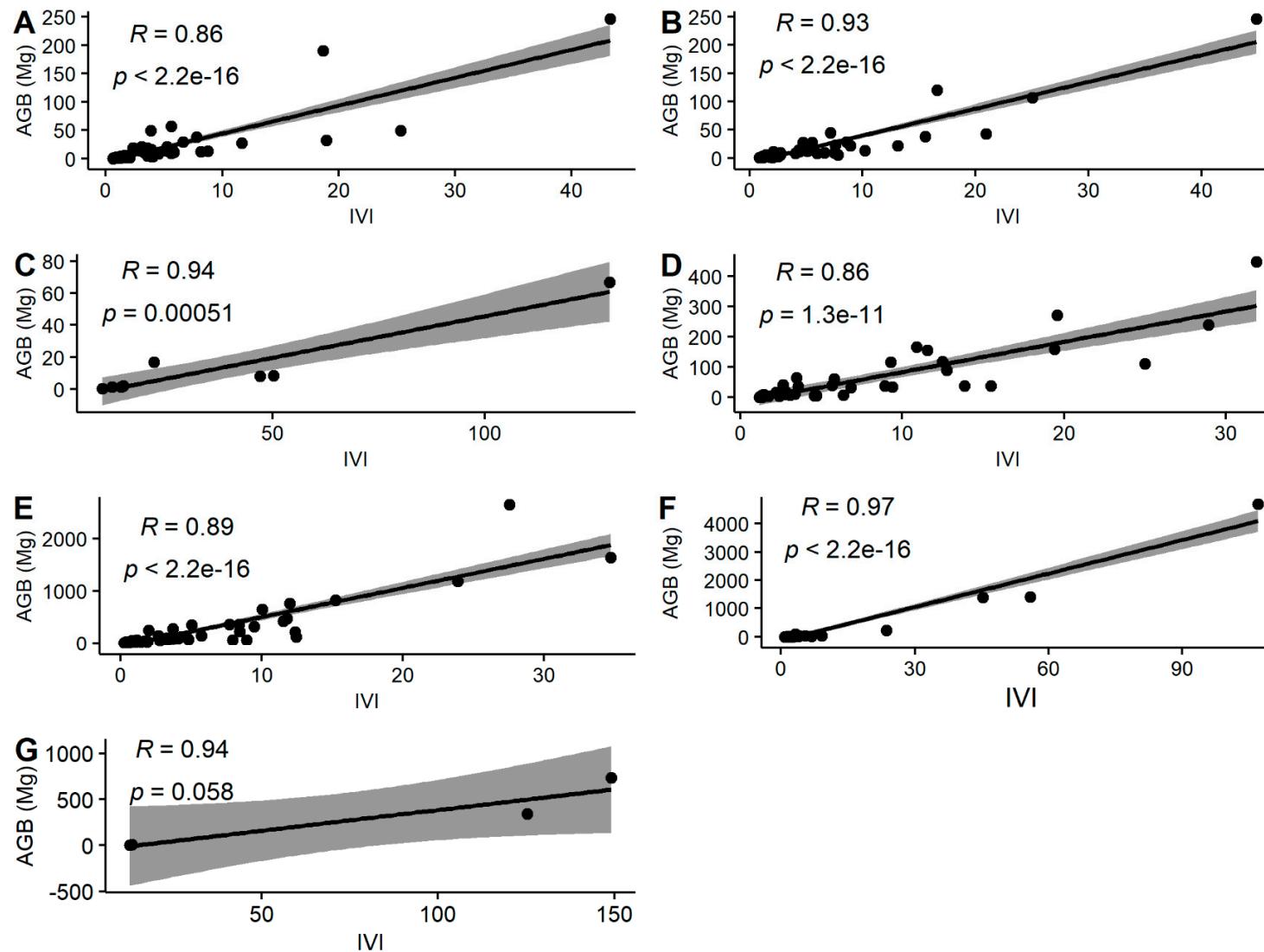
	<i>Eriobotrya japonica</i>	<i>Persea americana</i>	<i>Eucalyptus sp.</i>	<i>Eucalyptus sp.</i>	<i>Eucalyptus sp.</i>	<i>Ficus thonningii</i>	<i>Ficus thonningii</i>
	<i>Grevillea robusta</i>	<i>Prunus africana</i>	<i>Persea americana</i>	<i>Terminalia brownii</i>		<i>Ficus thonningii</i>	<i>Ficus ingens</i>
	<i>Prunus africana</i>	<i>Maesa lanceolata</i>	<i>Lannea alata</i>	<i>Mangifera indica</i>	<i>Persea americana</i>		<i>Bersama abyssinica</i>
	<i>Eucalyptus sp.</i>	<i>Acacia mearnsii</i>	<i>Jacaranda mimosifolia</i>	<i>Ekebergia capensis</i>			
Grassland	<i>Acacia tortilis</i>	<i>Acacia tortilis</i>	<i>Albizia anthelmintica</i>	<i>Acacia tortilis</i>	<i>Acacia tortilis</i>	<i>Acacia tortilis</i>	
	<i>Portulacaria afra</i>	<i>Albizia anthelmintica</i>					<i>Acacia reficiens</i>
	<i>Acacia senegal</i>	<i>Portulacaria afra</i>					
	<i>Balanites aegyptiacus</i>						
	<i>Acacia mellifera</i>						
Mixed forest	<i>Maesa lanceolata</i>	<i>Maesa lanceolata</i>	<i>Grevillea robusta</i>	<i>Cupressus lusitanica</i>	<i>Albizia gummifera</i>	<i>Albizia gummifera</i>	<i>Albizia gummifera</i>

<i>Cinnamomum camphora</i>	<i>Cupressus lusitanica</i>	<i>Albizia gummosifera</i>	<i>Albizia gummosifera</i>	<i>Nuxia floribunda</i>	<i>Eucalyptus sp.</i>	<i>Eucalyptus sp.</i>
<i>Eucalyptus sp.</i>	<i>Xymalos monospora</i>	<i>Tabernaemontana stapfiana</i>	<i>Eucalyptus sp.</i>	<i>Syzygium guineense</i>	<i>Millettia oblata</i>	<i>Xymalos monospora</i>
<i>Tabernaemontana stapfiana</i>	<i>Phoenix reclinata</i>	<i>Nuxia floribunda</i>	<i>Cussonia spicata</i>	<i>Cupressus lusitanica</i>	<i>Syzygium guineense</i>	<i>Macaranga capensis</i>
<i>Xymalos monospora</i>	<i>Tabernaemontana stapfiana</i>	<i>Cupressus lusitanica</i>	<i>Grevillea robusta</i>	<i>Eucalyptus sp.</i>	<i>Cupressus lusitanica</i>	<i>Pouteria adolfi-friedericii</i>
Montane forest	<i>Tabernaemontana stapfiana</i>	<i>Albizia gummosifera</i>				
	<i>Oxyanthus speciosus</i>	<i>Maesa lanceolata</i>	<i>Millettia oblata</i>	<i>Millettia oblata</i>	<i>Macaranga capensis</i>	<i>Macaranga capensis</i>
	<i>Celtis africana</i>	<i>Millettia oblata</i>	<i>Albizia gummosifera</i>	<i>Macaranga capensis</i>	<i>Albizia gummosifera</i>	<i>Syzygium guineense</i>
	<i>Cola greenwayi</i>	<i>Macaranga capensis</i>	<i>Macaranga capensis</i>	<i>Craibia zimmermannii</i>	<i>Syzygium guineense</i>	<i>Craibia zimmermannii</i>
						<i>Syzygium guineense</i>

	<i>Millettia oblata</i>	<i>Celtis africana</i>	<i>Rapanea melanophloeos</i>	<i>Strombosia scheffleri</i>	<i>Prunus africana</i>	<i>Tabernaemontana stapfiana</i>	<i>Macaranga capensis</i>
Plantation forest	<i>Eucalyptus sp.</i>	<i>Eucalyptus sp.</i>					
	<i>Acacia mearnsii</i>	<i>Cupressus lusitanica</i>	<i>Pinus sp.</i>	<i>Cupressus lusitanica</i>	<i>Pinus sp.</i>	<i>Pinus sp.</i>	<i>Pinus sp.</i>
	<i>Cupressus lusitanica</i>	<i>Pinus sp.</i>	<i>Cupressus lusitanica</i>	<i>Pinus sp.</i>	<i>Cupressus lusitanica</i>	<i>Cupressus lusitanica</i>	<i>Cupressus lusitanica</i>
	<i>Pinus sp.</i>	<i>Acacia mearnsii</i>	<i>Grevillea robusta</i>	<i>Grevillea robusta</i>	<i>Xymalos monospora</i>		
	<i>Macaranga capensis</i>	<i>Vepris simplicifolia</i>	<i>Acacia mearnsii</i>		<i>Acacia mearnsii</i>		
Riverine forest	<i>Vachellia xanthophloea</i>	<i>Vachellia xanthophloea</i>	<i>Newtonia hildebrandtii</i>	<i>Newtonia hildebrandtii</i>	<i>Vachellia xanthophloea</i>	<i>Newtonia hildebrandtii</i>	<i>Newtonia hildebrandtii</i>
		<i>Trichilia lepidota</i>	<i>Vachellia xanthophloea</i>	<i>Cordia goetzei</i>	<i>Newtonia hildebrandtii</i>	<i>Vachellia xanthophloea</i>	<i>Vachellia xanthophloea</i>
				<i>Vachellia xanthophloea</i>			



**Supplementary Figure S1.** Contribution (%) of diameter at breast height (DBH) classes to plot-level aboveground biomass (AGB) in different land cover (LC) types.



**Supplementary Figure S2.** Relationship between importance value index and aboveground biomass in the different LC types: (A) Bushland; (B) Cropland and homestead; (C) Grassland; (D) Mixed forest, (E) Montane forest; (F) Plantation forest; (G) Riverine forest.