

Appendix 2. Parameters and expressions of the allometric models generated using diameter at breast height DBH (cm), height H (m) and wood density ρ (g.cm⁻³)

Models	LUCa	Intercept	DBH	H	DBH:H	ρ	DBH: ρ	AIC	Expl. Dev.	Nagelkerke
	Coefficients	β_0	β_1	β_2	β_3	β_4	β_5			
I	$\ln(AGB) =$	$\beta_0 +$	$\beta_1(DBH)$							
	Forest land	2.391980*** (0.082228)	0.111911*** (0.003528)					1921.3	0.82	0.89
	Grassland	2.219779*** (0.092797)	0.114745*** (0.004002)					895.75	0.90	0.94
	Cropland	2.751514*** (0.072229)	0.091492*** (0.002608)					1981.3	0.84	0.91
	Settlements	2.454958*** (0.091445)	0.091898*** (0.003292)					636.64	0.91	0.95
	Agroforestry	2.563685*** (0.137175)	0.077676*** (0.004729)					241.67	0.92	0.95
II	$\ln(AGB) =$	$\beta_0 +$	$\beta_1(DBH)$	$+$	$\beta_2(H)$	$+$	$\beta_3(DBH \times H)$			
	Forest land	-0.051323 (0.178402)	0.160755*** (0.009200)		0.456829*** (0.029571)		-0.011051*** (0.001321)	1745.9	0.93	0.96
	Grassland	-0.115578 (0.227236)	0.177817*** (0.010732)		0.439903*** (0.040451)		-0.012521*** (0.001474)	821.11	0.96	0.98
	Cropland	0.0871685 (0.1495242)	0.1549490*** (0.0062096)		0.4660558*** (0.0251691)		-0.0113066*** (0.0007811)	1818.4	0.94	0.97
	Settlements	0.570740* (0.257908)	0.153706*** (0.011535)		0.329399*** (0.043811)		-0.010279*** (0.001639)	607.38	0.95	0.97
	Agroforestry	0.361587 (0.444254)	0.136600*** (0.015331)		0.403086*** (0.085069)		-0.010145*** (0.002141)	226.77	0.96	0.98
III	$\ln(AGB) =$	$\beta_0 +$	$\beta_1(DBH)$	$+$	$\beta_2(H)$	$+$	$\beta_3(DBH \times H)$	$\beta_4(\rho) +$	$\beta_5(DBH \times \rho)$	
	Generic	-0.7654108*** (0.1091666)	0.1573235*** (0.0042834)		0.4238142*** (0.0155108)		-0.0108973*** (0.0005404)	1.3500342*** (0.1004703)	2300.2	
	Agroforestry	Model reduced to the type II model								
	Forest land	-0.529352* (0.218806)	0.153447*** (0.009621)		0.421777*** (0.022671)		-0.011862*** (0.001007)	0.838169** (0.285044)	0.024398* (0.011265)	1645.1
	Grassland	-0.406853 (0.276970)	0.146300*** (0.013038)		0.418648*** (0.028276)		-0.011198*** (0.001026)	0.729644* (0.366277)	0.027054° (0.015229)	757.26
	Cropland	-0.7272044*** (0.1278645)	0.1501417*** (0.0045440)		0.4212572 *** (0.0185620)		-0.0103647*** (0.0005729)	1.4462214*** (0.1095952)		1709.1
	Settlements	-0.031603 (0.284948)	0.150500*** (0.010299)		0.341267*** (0.039210)		-0.010006*** (0.001463)	0.938432*** (0.260039)		597.9

Note: The data were fitted for the generic model (all watershed) and for each land-use category (LUCa). The coefficients are provided at the link scale. The log-link was used for fitting the gamma glm. The ‘:’ operator represents the interaction between both involved variables. Standard error is provided in parenthesis. The sample size differed by land use category: agroforestry: 25, forest: 181, cropland: 178, settlements: 63, grassland: 90. AGB = Aboveground biomass based on dry weight (kg/tree). The statistical analyses are significant at 95% confidence interval. ***p < 0.001; **p < 0.01; *p < 0.05; and non-significant, °p > 0.05.