

Appendix 1: Carbon stock (t ha<sup>-1</sup>) dataset for the ASB benchmark sites.  
(ASB site# refers to co-located biodiversity plot numbers)

ASB Site#	Carbon case#	Country	Bench mark	long	lat	Land-use System	Specific use	Age since burn	abvgrndC	soil C (0-20)*
	73	bra	ppeix	.	.	past	pasture+pueraria	6	7.04	21.17
	76	bra	ppeix	.	.	past	Brizatha+pueraria	11	7.25	34.21
BRA20	77	bra	ppeix	67.09	10.01	past	pasture	11	6.26	44.85
BRA018	75	bra	ppeix	67.09	10.01	newfal	natural fallow	3	17.33	40.64
BRA014	71	bra	ppeix	.	.	newaf	Ppalm/cup/bnut	6	49.79	35.00
	72	bra	ppeix	.	.	newaf	ppalm/heart	6	36.36	24.93
BRA017	69	bra	ppeix	67.09	10.01	lfor	logged forest	NA	142.05	33.07
	70	bra	ppeix	.	.	lfor	logged forest	NA	131.88	30.37
	74	bra	ppeix	.	.	midfal	natural fallow	10	23.70	29.13
	78	bra	ppeix	.	.	imp	imperata	11	2.06	24.53
	83	bra	theo	62.11	10.06	past	trad pasture	12	5.82	.
	87	bra	theo	62.23	10.13	past	trad pasture	11	9.51	.
	97	bra	theo	.	.	past	improved pasture	13	3.84	26.37
	98	bra	theo	.	.	past	degraded pasture	13	1.19	26.78
	88	bra	theo	.	.	oldaf	coffee mono	15	16.59	16.37
BRA001	89	bra	theo	61.57	10.55	oldaf	coffee + rubber	15	97.19	12.72
BRA005	90	bra	theo	62.00	10.58	oldaf	coffee + timber	15	64.50	23.33
	81	bra	theo	62.11	10.06	newfal	natural fallow	5	62.74	.
	85	bra	theo	62.23	10.13	newfal	natural fallow	5	121.27	.
BRA008	91	bra	theo	62.11	10.06	impfal	imp fallow inga	5	13.85	41.54
BRA009	92	bra	theo	62.11	10.06	impfal	imp fallow senna	5	11.84	36.76
	93	bra	theo	62.11	10.06	impfal	imp fallow inga	5	17.23	44.54
	94	bra	theo	62.11	10.06	impfal	imp fallow senna	5	11.97	31.77
	95	bra	theo	62.11	10.06	impfal	imp fallow pueraria	5	3.06	36.80
	96	bra	theo	62.11	10.06	newfal	natural	4	5.15	39.42
BRA010	82	bra	theo	62.11	10.06	newaf	coffee	11	16.38	.
	86	bra	theo	62.23	10.13	newaf	coffee	11	11.89	.
	79	bra	theo	62.11	10.06	lfor	logged forest	NA	142.70	.
BRA012	84	bra	theo	62.23	10.13	lfor	logged forest	NA	175.20	.
	80	bra	theo	62.11	10.06	crop	crop	1	35.98	.
	33	cam	ebol	11.25	2.42	oldfal	natural fallow	22	208.43	51.20
	38	cam	ebol	11.03	2.59	oldfal	natural fallow	20	104.64	48.13
	32	cam	ebol	11.25	2.42	lfor	logged forest	NA	248.28	57.40
CAMASB08	37	cam	ebol	11.03	2.59	lfor	logged forest	NA	205.35	45.51
	34	cam	ebol	11.25	2.42	oldaf	Jcacao	25	131.64	49.60
CAMASB10	39	cam	ebol	11.03	2.59	oldaf	Jcacao	25	100.14	41.80
	36	cam	ebol	11.25	2.42	newfal	natural fallow	4	7.19	51.70
CAMASB09	41	cam	ebol	11.03	2.59	newfal	natural fallow	4	6.10	29.95
	35	cam	ebol	11.25	2.42	midfal	natural fallow	10	36.35	54.60
	40	cam	ebol	11.03	2.59	midfal	natural fallow	11	89.23	39.61
	42	cam	ebol	11.03	2.59	crop		1	0.00	55.66
	46	cam	mbal	11.61	3.61	oldfal	natural fallow	15	141.12	60.80
	52	cam	mbal	11.79	3.30	oldfal	natural fallow	15	98.70	36.40
CAMASB01	45	cam	mbal	11.61	3.61	lfor	logged forest	NA	252.02	49.40
	51	cam	mbal	11.79	3.30	lfor	logged forest	NA	192.60	37.40
	48	cam	mbal	11.61	3.61	oldaf	Jcacao	25	54.23	52.80
	54	cam	mbal	11.79	3.30	oldaf	Jcacao	25	61.00	32.50
CAMASB02	49	cam	mbal	11.61	3.61	newfal	natural fallow	4	10.40	58.20
	55	cam	mbal	11.79	3.30	newfal	natural fallow	4	4.30	31.20
CAMASB04	47	cam	mbal	11.61	3.61	midfal	natural fallow	9	67.15	40.30
	53	cam	mbal	11.79	3.30	midfal	natural fallow	9	65.90	35.90
CAMASB03	50	cam	mbal	11.61	3.61	crop		1	0.00	41.30
	56	cam	mbal	11.79	3.30	crop		1	0.00	17.90

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CAMASB06	58	cam	yao	11.26	4.24	oldfal	natural fallow	20	107.90	32.20
	64	cam	yao	11.57	3.93	oldfal	natural fallow	15	126.70	45.00
	57	cam	yao	11.26	4.24	oldfal	natural fallow	25	129.00	33.00
	63	cam	yao	11.57	3.93	lfor	logged forest	NA	239.60	37.50
	60	cam	yao	11.26	4.24	oldaf	Jcacao	25	96.60	39.50
	61	cam	yao	11.26	4.24	newfal	natural fallow	4	2.80	20.50
	67	cam	yao	11.57	3.93	newfal	natural fallow	4	3.90	42.50
	59	cam	yao	11.26	4.24	midfal	natural fallow	9	114.40	36.90
	65	cam	yao	11.57	3.93	midfal	natural fallow	9	61.80	30.00
	62	cam	yao	11.26	4.24	crop		1	2.00	22.90
CAMASB07	68	cam	yao	11.57	3.93	crop		1	2.00	37.50
ASBJAM1	17	ind	jam	102.10	1.07	oldf	forest	NA	376.31	56.43
ASBJAM2	18	ind	jam	102.10	1.08	lfor	logged forest	NA	105.51	48.51
ASBJAM4	19	ind	jam	101.93	1.67	oldf	forest	NA	236.20	34.97
ASBJAM5	20	ind	jam	101.94	1.66	oldaf	Jrubber	30	41.55	70.20
ASBJAM6	21	ind	jam	102.27	1.59	oldaf	Jrubber	30	95.96	28.95
	22	ind	jam	102.27	1.58	oldaf		30	60.08	27.36
ASBJAM15	23	ind	jam	102.37	1.53	oldaf	Jrubber	30	81.31	49.37
ASBJAM3	24	ind	jam	102.11	1.08	newaf	paraserianthes	5	20.67	37.87
ASBJAM11	25	ind	jam	102.39	1.55	newaf		5	6.29	60.32
	26	ind	jam	102.42	1.55	newaf		5	21.02	38.99
ASBJAM9	29	ind	jam	102.35	1.59	imp	imperata	22	1.80	48.44
ASBJAM10	30	ind	jam	102.35	1.59	imp	imperata	22	2.49	39.76
ASBJAM8	27	ind	jam	102.30	1.59	crop	cassava	3	2.22	30.10
ASBJAM14	28	ind	jam	102.34	1.60	crop	cassava	3	1.41	22.87
ASBLAM01	1	ind	lam	104.92	4.50	lfor	logged forest	NA	144.62	54.72
ASBLAM05	2	ind	lam	104.98	4.43	lfor	logged forest	NA	49.07	48.26
ASBLAM14	3	ind	lam	105.04	4.47	lfor	logged forest	NA	73.61	45.75
ASBLAM09	4	ind	lam	105.04	4.48	oldaf	fruit agroforest	30	94.33	31.39
ASBLAM12	5	ind	lam	105.02	4.46	oldaf	fruit	30	77.99	80.43
ASBLAM15	6	ind	lam	105.06	4.47	oldaf	rubber+banan	30	137.80	42.60
ASBLAM04	7	ind	lam	104.92	4.45	newaf	oilpalm	8	65.14	29.08
ASBLAM06	8	ind	lam	104.98	4.43	newaf	paraserianthes	2	23.38	57.54
ASBLAM13	9	ind	lam	105.05	4.47	newaf	rubber+banana	3	9.22	31.37
ASBLAM03	13	ind	lam	104.92	4.46	imp	imperata	9	3.51	35.78
ASBLAM08	14	ind	lam	104.99	4.44	imp	imperata	9	2.92	40.29
ASBLAM11	15	ind	lam	105.03	4.46	imp	imperata	9	1.01	19.20
ASBLAM16	16	ind	lam	105.01	4.45	imp	imperata	9	1.50	37.39
ASBLAM02	10	ind	lam	159.26	4.45	crop	cassava	3	3.60	28.02
ASBLAM07	11	ind	lam	105.01	4.45	crop	cassava	3	1.39	15.90
ASBLAM10	12	ind	lam	105.04	4.47	crop	cassava	3	0.74	21.76