Model-based approach for estimating biomass and organic carbon in tropical seagrass ecosystems

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Table S1.

(a) Model fit results for the aboveground biomass (AG) prediction from seagrass coverage (cover) for monospecific species patches

Formula form	n	AIC	Delta AIC	AIC weight
AG=a+b*cover+c*cover^2	45	**373.2**	0	0.568
AG=a+b*cover	45	**373.8**	0.6	0.421
AG=a+b*sqrt(cover)	45	381.1	7.91	0.011
AG=a+b*log(cover)	45	392.6	19.46	0
Null model	45	435.3	62.10	0

(b) Model fit results for the aboveground biomass (AG) prediction from seagrass coverage (cover) for mixed species patches

Formula form	n	AIC	Delta AIC	AIC weight
AG=a+b*cover	45	**397.1**	0	0.543
AG=a+b*cover+c*cover^2	45	398.6	1.52	0.254
AG =a+b*sqrt(cover)	45	399.3	2.26	0.175
AG =a+b*log(cover)	45	403	5.96	0.028
Null model	45	428.3	31.29	0

(c) Model fit results for the belowground biomass (BG) prediction from aboveground biomass (AG) for monospecific species patches

Formula form	n	AIC	Delta AIC	AIC weight
BG=a+b*sqrt(AG)	45	**516.5**	0	0.393
BG=a+b*AG	45	**516.5**	0.05	0.383
BG=a+b*AG+c*AG	45	517.6	1.16	0.220
BG=a+b*log(AG)	45	525.9	9.41	0.004
Null model	45	591.6	75.14	0

(d) Model fit results for the belowground biomass (BG) prediction from aboveground biomass (AG) for mixed species patches

Formula form	n	AIC	Delta AIC	AIC weight
BG=a+b*AG	45	**600**	0	0.471
BG=a+b*sqrt(AG)	45	**600.9**	0.89	0.302
BG=a+b*AG+c*AG^2	45	602.4	2.37	0.144
BG=a+b*sqrt(AG)	45	603.5	3.49	0.082
Null model	45	616.9	16.82	0

(e) Model fit results for the organic carbon within living vegetation (Carbon) prediction for monospecific species patches

Formula form	n	AIC	Delta AIC	AIC weight
Carbon=a+b*biomass	20	**-5.9**	0	1
Carbon=a+b*sqrt(biomass)	20	28.6	34.48	0
Carbon=a+b*log(biomass)	20	51.8	57.75	0
Null model	20	73.1	78.97	0

(f) Model fit results for the organic carbon within living vegetation (Carbon) prediction for mixed species patches

Formula form	n	AIC	Delta AIC	AIC weight
Carbon=a+b*biomass	20	**-20.1**	0	1
Carbon=a+b*sqrt(biomass)	20	25.6	45.78	0
Carbon=a+b*log(biomass)	20	48.5	68.48	0
Null model	20	71.4	91.57	0

(g) Model fit results for the organic carbon prediction in sediment (C_{org}) from LOI for monospecific species patches

Formula form	n	AIC	Delta AIC	AIC weight
C_{org}=a+b*LOI	100	**551.1**	0	0.992
C_{org}=a+b*sqrt(LOI)	100	560.8	9.70	0.008
C_{org} =a+b*log(LOI)	100	573.9	22.78	0
Null model	100	596.2	45.07	0

(h) Model fit results for the organic carbon prediction in sediment (C_{org}) from LOI for mixed species patches

Formula form	n	AIC	Delta AIC	AIC weight
C_{org}=a+b*sqrt(LOI)	100	**348.8**	0	0.386
C_{org}=a+b*LOI	100	**349.1**	0.29	0.334
C_{org}=a+b*log(LOI)	100	349.4	0.64	0.280
Null model	100	368	19.23	0

(i) Model fit results for the organic carbon prediction in sediment (C_{org}) from various plant attributes for monospecific species patches

Formula form	n	AIC	Delta AIC	AIC weight
C_{org} =a+b*log(BG)	45	**421.4**	0	0.559
C_{org} =a+b*sqrt(BG)	45	**421.9**	0.48	0.440
C_{org} =a+b*BG	45	425.4	12.96	0.001
C_{org} =a+b*cover	45	432.6	20.21	0
C_{org} =a+b*sqrt(cover)	45	439.0	26.64	0
C_{org} =a+b*sqrt(AG)	45	445.6	33.18	0
C_{org} =a+b*AG	45	447.8	35.44	0
C_{org} =a+b*log(AG)	45	449.3	36.92	0
C_{org} =a+b*log(cover)	45	450.6	38.15	0
Null model	45	508.3	95.90	0

(j) Model fit results for the organic carbon prediction in sediment (C_{org}) from various plant attributes for mixed species patches

Formula form	n	AIC	Delta AIC	AIC weight
C_{org}=a+b*log(BG)	45	**419.5**	0	0.854
C_{org}=a+b*sqrt(BG)	45	423.0	3.57	0.143
C_{org}=a+b*BG	45	431.2	11.72	0.002
C_{org}=a+b*sqrt(AG)	45	458.8	39.37	0
C_{org}=a+b*AG	45	459.8	40.29	0
C_{org}=a+b*log(AG)	45	460.9	41.46	0
C_{org}=a+b*cover	45	487.4	67.92	0
C_{org}=a+b*sqrt(cover)	45	487.7	68.83	0
C_{org}=a+b*log(cover)	45	488.3	68.83	0
Null model	45	493.7	74.20	0