

Appendix

Estimated regression parameters and fit for models predicting percent biophony (PB)

variable	radius (m)	intercept mean (γ_a)	intercept effect (γ_{ai})	intercept fit (R^2)	slope mean (γ_b)	slope effect (γ_{bi})	slope fit (R^2)	Δ WAIC	WAIC SE	rank
buildings	5	0.51	12.20	0.09	0.28	-8.20	0.03	10	29	48
	10	0.47	2.30	0.32	0.29	-1.40	0.16	10	30	40
	20	0.49	0.70	0.11	0.31	-1.00	0.27	7	30	27
	40	0.48	0.90	0.24	0.33	-1.00	0.36	8	30	26
	80	0.35	2.10	0.70	0.35	-0.90	0.44	7	30	30
	160	0.36	1.60	0.68	0.35	-0.90	0.45	7	30	31
	320	0.28	2.30	0.81	0.37	-1.00	0.54	5	30	14
	640	-0.05	5.30	0.92	0.40	-1.30	0.58	1	29	2
	1280	-0.26	6.90	0.92	0.44	-1.60	0.47	5	30	15
	2560	-0.09	4.70	0.74	0.38	-0.90	0.04	11	28	49
other constructed areas	5	0.43	0.40	0.46	0.33	-0.30	0.35	8	30	36
	10	0.44	0.40	0.41	0.34	-0.30	0.40	8	30	29
	20	0.39	0.70	0.53	0.35	-0.40	0.45	6	30	23
	40	0.23	1.70	0.79	0.37	-0.60	0.54	5	30	18
	80	0.28	1.70	0.75	0.37	-0.70	0.61	5	30	12
	160	0.17	2.40	0.83	0.39	-0.80	0.60	4	30	11
	320	0.13	2.90	0.83	0.40	-1.00	0.61	5	30	19
	640	-0.04	3.40	0.84	0.44	-1.10	0.65	4	30	7
	1280	-0.20	4.30	0.84	0.47	-1.30	0.52	5	29	17
	2560	-0.53	6.60	0.86	0.44	-1.10	0.14	7	30	20
trees	5	0.77	-0.50	0.65	0.15	0.20	0.41	8	30	34
	10	0.72	-0.40	0.56	0.14	0.30	0.47	8	30	37
	20	0.64	-0.30	0.39	0.14	0.30	0.45	7	30	33
	40	0.87	-0.70	0.66	0.09	0.30	0.54	7	30	21
	80	1.12	-1.10	0.81	0.05	0.40	0.62	4	29	8
	160	1.13	-1.10	0.73	0.04	0.40	0.59	8	30	32
	320	1.39	-1.70	0.82	-0.02	0.60	0.68	4	30	6
	640	1.78	-2.70	0.89	-0.07	0.70	0.70	2	30	3
	1280	2.32	-4.10	0.90	-0.15	0.90	0.58	3	31	5
	2560	2.59	-4.90	0.87	0.10	0.40	0.01	8	30	38
herbaceous vegetation	5	0.37	0.70	0.64	0.31	-0.20	0.14	9	30	44
	10	0.39	0.60	0.60	0.31	-0.20	0.15	9	29	41
	20	0.41	0.50	0.49	0.31	-0.20	0.11	11	30	47
	40	0.41	0.70	0.67	0.31	-0.20	0.12	7	30	28
	80	0.27	1.20	0.77	0.32	-0.30	0.11	7	29	22
	160	0.41	0.50	0.26	0.30	-0.20	0.01	9	29	43
	320	0.40	0.60	0.32	0.31	-0.20	0.01	10	29	46
	640	0.47	0.20	0.01	0.29	-0.10	-0.03	10	30	42
	1280	0.42	0.40	0.03	0.23	0.20	-0.02	10	30	45
	2560	0.77	-1.10	0.21	0.19	0.30	0.00	11	30	50
D ₂ N	5	0.47	0.52	0.21	0.33	-0.55	0.30	9	29	39
	10	0.45	0.57	0.21	0.34	-0.63	0.35	9	30	35
	20	0.42	0.93	0.41	0.36	-0.77	0.44	8	30	25
	40	0.32	1.94	0.74	0.38	-0.95	0.50	4	29	4
	80	0.14	3.40	0.80	0.41	-1.19	0.66	4	30	10
	160	0.18	2.85	0.81	0.39	-0.99	0.54	6	29	16
	320	0.09	3.48	0.78	0.42	-1.18	0.60	6	29	24
	640	-0.09	4.18	0.86	0.44	-1.14	0.50	5	29	9
	1280	-0.72	8.52	0.91	0.56	-2.00	0.70	0	28	1
	2560	-0.42	6.43	0.90	0.48	-1.42	0.44	5	29	13

Estimated regression parameters and fit for models predicting sound exposure level (SEL)

variable	radius (m)	intercept mean (γ_α)	intercept effect ($\gamma_{\alpha i}$)	intercept fit (R^2)	slope mean (γ_β)	slope effect ($\gamma_{\beta i}$)	slope fit (R^2)	Δ WAIC	WAIC SE	rank
buildings	5	-50.52	254.80	-0.01	0.15	9.80	0.75	6	18	35
	10	-51.30	47.10	0.11	0.17	1.10	0.80	6	18	44
	20	-52.10	43.90	0.35	0.15	0.20	0.17	6	19	43
	40	-53.06	47.80	0.53	0.15	0.00	0.00	5	18	30
	80	-53.35	40.10	0.54	0.14	-0.10	0.03	5	18	29
	160	-54.25	41.90	0.65	0.18	-0.30	0.66	5	18	28
	320	-54.71	45.70	0.70	0.20	-0.50	0.79	2	18	7
	640	-54.50	44.60	0.55	0.16	-0.20	0.43	4	18	27
	1280	-56.48	59.90	0.55	0.21	-0.50	0.61	5	18	26
	2560	-58.99	87.10	0.40	0.36	-2.00	0.86	6	18	40
other constructed areas	5	-52.73	11.60	0.50	0.13	0.10	0.45	6	18	39
	10	-53.78	16.40	0.69	0.16	-0.10	0.40	5	18	25
	20	-54.63	23.20	0.80	0.18	-0.20	0.77	4	18	14
	40	-54.85	29.10	0.85	0.20	-0.30	0.83	2	18	8
	80	-55.25	35.30	0.91	0.23	-0.50	0.83	1	18	5
	160	-55.65	39.80	0.90	0.21	-0.50	0.85	1	18	3
	320	-56.14	46.30	0.90	0.24	-0.80	0.88	2	18	6
	640	-57.53	49.80	0.87	0.27	-0.90	0.90	2	17	4
	1280	-59.64	60.00	0.75	0.33	-1.10	0.89	3	17	15
	2560	-60.97	72.50	0.42	0.38	-1.60	0.86	5	18	23
trees	5	-45.09	-8.70	0.36	0.18	-0.10	0.75	7	18	46
	10	-44.50	-10.50	0.48	0.17	-0.10	0.69	5	19	38
	20	-43.37	-12.00	0.57	0.13	0.00	0.19	5	19	17
	40	-42.76	-13.80	0.62	0.17	0.00	0.28	0	19	1
	80	-41.66	-15.40	0.63	0.14	0.00	0.02	4	19	22
	160	-40.67	-17.00	0.66	0.14	0.00	-0.04	4	19	11
	320	-39.57	-20.00	0.69	0.15	0.00	0.08	4	19	10
	640	-38.47	-23.40	0.67	0.13	0.00	0.06	4	19	16
	1280	-34.78	-33.10	0.58	0.02	0.30	0.67	5	18	18
	2560	-27.85	-51.90	0.27	-0.72	2.00	0.96	3	17	9
herbaceous vegetation	5	-49.36	0.80	-0.03	0.07	0.20	0.71	6	19	37
	10	-50.08	1.60	-0.03	0.08	0.20	0.82	9	19	50
	20	-49.44	-1.20	-0.03	0.02	0.50	0.94	6	19	36
	40	-49.19	-4.30	-0.01	-0.03	0.90	0.98	8	19	49
	80	-48.46	-7.40	0.02	-0.03	0.90	0.97	5	20	41
	160	-48.18	-9.70	0.03	-0.03	0.90	0.97	9	21	48
	320	-46.83	-15.40	0.08	-0.13	1.30	0.98	5	19	32
	640	-45.55	-18.90	0.10	-0.24	1.60	0.98	5	19	24
	1280	-40.71	-39.40	0.26	-0.31	1.80	0.96	5	18	20
	2560	-42.00	-32.40	0.08	-0.14	1.10	0.81	7	18	45
D ₂ N	5	-52.75	19.08	0.23	0.12	0.59	0.94	5	19	19
	10	-53.19	22.62	0.31	0.12	0.56	0.94	5	19	21
	20	-53.96	29.58	0.46	0.14	0.33	0.80	5	19	31
	40	-54.61	37.33	0.56	0.15	0.27	0.69	0	18	2
	80	-55.56	42.88	0.69	0.19	-0.12	0.21	4	18	12
	160	-55.16	38.92	0.64	0.16	-0.18	0.42	8	20	47
	320	-56.31	44.09	0.66	0.20	-0.17	0.30	6	19	33
	640	-56.08	37.60	0.50	0.16	0.11	0.15	6	18	34
	1280	-57.83	52.97	0.57	0.27	-0.73	0.73	3	18	13
	2560	-54.81	29.96	0.22	0.05	0.75	0.82	6	18	42