Supplementary Material

Co-design and Traditional Owner participation in an assessment of abundance and size of *Donax deltoides* (garlaany, pipi) in Ngambaa Country, New South Wales, Australia

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Table S1. Variance inflation factor (VIF) test for collinearity for environmental variables analysed for adult (shell length, SL > 30 mm) *Donax deltoides* **sampled over 13 months (November 2021–2022) at Stuarts Point Beach, NSW.**

Collinearity values

Low Correlation

Term	VIF	VIF 95% CI	Increased SE Tolerance	Tolerance	95% CI
Month	2.09	[1.73, 2.64]	1.45	0.48	[0.38, 0.58]
location	3.17	[2.54, 4.05]	1.78	0.32	[0.25, 0.39]
snapwave	1.62	[1.38, 2.03]	1.27	0.62	[0.49, 0.73]
sandgrain	4.23	[3.34, 5.45]	2.06	0.24	[0.18, 0.30]
slope	3.56	[2.83, 4.56]	1.89	0.28	[0.22, 0.35]
pen	1.81	[1.51, 2.26]	1.34	0.55	[0.44, 0.66]
max_tide	2.62	[2.12, 3.32]	1.62	0.38	[0.30, 0.47]
min_tide	2.34	[1.92, 2.96]	1.53	0.43	[0.34, 0.52]

Moderate Correlation

Term	VIF	VIF 95% CI	Increased SE Tolerance	Tolerance	95% CI
tide_phase	5.28	[4.14, 6.84]	2.30	0.19	[0.15, 0.24]

Table S2. Variance inflation factor (VIF) test for collinearity for environmental variables analysed for juvenile (SL 15–30 mm) *Donax deltoides* **sampled over 13 months (November 2021–2022) at Stuarts Point Beach, NSW.**

Collinearity values

Low Correlation

Term	VIF	VIF 95% CI	Increased SE Tolerance	Tolerance	95% CI
Month	1.86	[1.54, 2.37]	1.36	0.54	[0.42, 0.65]
location	4.55	[3.55, 5.95]	2.13	0.22	[0.17, 0.28]
snapwave	1.49	[1.27, 1.88]	1.22	0.67	[0.53, 0.79]
slope	3.65	[2.88, 4.75]	1.91	0.27	[0.21, 0.35]
pen	2.09	[1.71, 2.66]	1.44	0.48	[0.38, 0.59]
min_tide	3.32	[2.63, 4.31]	1.82	0.30	[0.23, 0.38]
max_tide	3.58	[2.83, 4.66]	1.89	0.28	[0.21, 0.35]

Moderate Correlation

Term	VIF	VIF 95% CI	Increased SE Tolerance	Tolerance	95% CI
tide_phase	6.90	[5.30, 9.10]	2.63	0.14	[0.11, 0.19]
sandgrain	7.04	[5.40, 9.28]	2.65	0.14	[0.11, 0.19]

Table S3. Variance inflation factor (VIF) test for collinearity for environmental variables analysed for recruit (SL ≤ 15 mm) *Donax deltoides* **sampled over 13 months (November 2021–2022) at Stuarts Point Beach, NSW.**

Collinearity values

Low Correlation

Term	VIF	VIF 95% CI	Increased SE Tolerance	Tolerance	95% CI
Month	1.91	[1.59, 2.41]	1.38	0.52	[0.41, 0.63]
Location	3.14	[2.51, 4.04]	1.77	0.32	[0.25, 0.40]
tide_phase	4.58	[3.59, 5.95]	2.14	0.22	[0.17, 0.28]
snapwave	1.50	[1.28, 1.88]	1.22	0.67	[0.53, 0.78]
sandgrain	3.44	[2.74, 4.43]	1.86	0.29	[0.23, 0.37]
slope	3.05	[2.44, 3.91]	1.75	0.33	[0.26, 0.41]
pen	1.79	[1.50, 2.25]	1.34	0.56	[0.44, 0.67]

Table S4. Variance inflation factor (VIF) test for collinearity for environmental variables analysed for mean length of *Donax deltoides* **sampled over 13 months (November 2021–2022) at Stuarts Point Beach, NSW.**

Collinearity values

Low Correlation

Term	VIF	VIF 95% CI	Increased SE Tolerance	Tolerance	95% CI
Month	1.75	[1.48, 2.15]	1.32	0.57	[0.46, 0.67]
Location	2.74	[2.25, 3.44]	1.66	0.36	[0.29, 0.44]
tide_phase	3.50	[2.83, 4.41]	1.87	0.29	[0.23, 0.35]
snapwave	1.34	[1.18, 1.64]	1.16	0.75	[0.61, 0.85]
sandgrain	3.24	[2.63, 4.07]	1.80	0.31	[0.25, 0.38]
slope	2.91	[2.38, 3.65]	1.71	0.34	[0.27, 0.42]
pen	1.86	[1.57, 2.29]	1.36	0.54	[0.44, 0.64]
min_tide	2.34	[1.94, 2.92]	1.53	0.43	[0.34, 0.51]
max_tide	2.68	[2.20, 3.35]	1.64	0.37	[0.30, 0.45]