

**Table S1.** Two-way ANOVA of water and sediment quality parameters of Pasur River estuary by sites and seasons. Significance is highlighted in bold.

Variable	Factor	D.f.	Sum of Squares	Mean Square	F	p-value
Temperature (°C)	Season	2	448.09	224.04	880.13	<b>&lt;0.001</b>
	Site	3	0.90	0.30	0.02	0.996
	Season × Site	6	1.80	0.30	1.27	0.310
Transparency (cm)	Season	2	1929.54	964.77	459.47	<b>&lt;0.001</b>
	Site	3	65.61	21.87	0.36	0.781
	Season × Site	6	222.91	0.49	15.16	0.089
Salinity (ppt)	Season	2	573.53	286.76	148.66	<b>&lt;0.001</b>
	Site	3	60.99	20.33	1.13	0.352
	Season × Site	6	188.84	0.31	8.91	0.120
pH	Season	2	0.99	0.50	21.43	<b>&lt;0.001</b>
	Site	3	0.73	0.24	7.52	<b>&lt;0.001</b>
	Season × Site	6	0.00	0.00	0.52	0.789
DO (mg/l)	Season	2	98.79	49.39	81.66	<b>&lt;0.001</b>
	Site	3	18.58	6.19	1.98	0.137
	Season × Site	6	25.77	0.13	4.95	0.092
Alkalinity (mg/l)	Season	2	14913.64	7456.82	19.45	<b>&lt;0.001</b>
	Site	3	12280.51	4093.50	8.57	<b>&lt;0.001</b>
	Season × Site	6	148.70	24.78	2.68	0.039
TDS (mg/l)	Season	2	17980.85	8990.43	17.01	<b>&lt;0.001</b>
	Site	3	17013.27	5671.09	9.86	<b>&lt;0.001</b>
	Season × Site	6	69.28	11.55	0.78	0.593
NO <sub>3</sub> -N (mg/l)	Season	2	7.71	3.85	59.06	<b>&lt;0.001</b>
	Site	3	2.03	0.68	2.77	0.058
	Season × Site	6	0.06	0.01	4.39	0.064
PO <sub>4</sub> -P (mg/l)	Season	2	22.95	11.47	83.15	<b>&lt;0.001</b>
	Site	3	4.37	1.46	2.01	0.132
	Season × Site	6	0.09	0.02	3.58	0.081
Sand (%)	Season	2	244.53	122.26	1193.75	<b>&lt;0.001</b>
	Site	3	3.23	1.08	0.14	0.935
	Season × Site	6	0.05	0.01	2.12	0.09
Silt (%)	Season	2	394.52	197.26	1887.88	<b>&lt;0.001</b>
	Site	3	3.19	1.06	0.09	0.967
	Season × Site	6	0.18	0.03	9.49	0.00
Clay (%)	Season	2	635.74	317.87	792.56	<b>&lt;0.001</b>
	Site	3	12.84	4.28	0.22	0.885
	Season × Site	6	0.07	0.01	0.80	0.58
Organic matter (%)	Season	2	62.74	31.37	355.20	<b>&lt;0.001</b>
	Site	3	2.79	0.93	0.47	0.702
	Season × Site	6	0.04	0.01	1.78	0.15
Density (ind./m <sup>2</sup> )	Season	2	1457246	728623.03	143.55	<b>&lt;0.001</b>
	Site	3	32621.64	10873.88	2.14	0.121
	Season × Site	6	24918.61	4153.10	0.82	0.567
No. of species	Season	2	2172.72	1086.36	196.53	<b>&lt;0.001</b>
	Site	3	742.08	247.36	44.75	0.152
	Season × Site	6	15.50	2.58	0.47	0.826
Shannon-wiener diversity index	Season	2	0.85	0.43	40.68	<b>&lt;0.001</b>
	Site	3	1.87	0.62	59.52	0.110
	Season × Site	6	0.10	0.02	1.51	0.219
Pioelu's evenness index	Season	2	0.40	0.20	35.60	<b>&lt;0.001</b>
	Site	3	0.12	0.04	7.04	0.081
	Season × Site	6	0.06	0.01	1.83	0.136