	Ile de la Passe (lagoonward)	Ile de la Passe (seaward)	Ile Anglaise (lagoonward)	Ile Anglaise (seaward)
Predicted sediment generation (kg $CaCO_3$ m^{-2} yr^{-1}) by producer (mean ± SE)[1]				
Parrotfish	4.185 ± 1.393	0.487 ± 0.038	1.458 ± 0.889	2.823 ± 2.204
Sea urchin	0.000 ± 0.000	0.146 ± 0.068	0.000 ± 0.000	0.203 ± 0.167
Endolithic sponges	0.042 ± 0.001	0.048 ± 0.003	0.042 ± 0.003	0.047 ± 0.004
Halimeda spp.	0.001 ± 0.001	0.000 ± 0.000	0.004 ± 0.001	0.001 ± 0.001
Bivalves	0.000 ± 0.000	0.000 ± 0.000	0.003 ± 0.000	0.000 ± 0.000
Gastropods	0.000 ± 0.000	0.001 ± 0.001	0.000 ± 0.000	0.001 ± 0.000
Benthic foraminifera	0.040 ± 0.000	0.025 ± 0.000	0.031 ± 0.000	0.021 ± 0.000
Total	4.260 ± 0.980	0.707 ± 0.060	1.540 ± 0.630	3.096 ± 1.560
Predicted sediment constituent abundance (%)[1]				
Coral	94.10	83.59	92.81	91.77
Crustose coralline algae	4.90	12.75	4.74	7.50
Halimeda	0.03	0.04	0.25	0.03
Mollusc	0.02	0.10	0.18	0.02
Benthic foraminifera	0.95	3.53	2.02	0.67
Other/unidentified	0.00	0.00	0.00	0.00
Predicted sediment grain-size contributions by size class (%)[1]				
>4 mm (pebble)	0.02	0.33	0.29	0.09
2-4 mm (gravel)	1.46	2.01	2.12	2.91
1-2 mm (very coarse sand)	21.51	16.87	22.34	23.79
0.5-1 mm (coarse sand)	29.68	25.17	27.09	30.22
0.25-0.5 mm (medium sand)	23.95	23.17	20.98	21.72
0.125-0.25 mm (fine sand)	11.88	13.49	11.70	10.68
63 µm to 0.125 mm (very fine sand)	5.75	7.77	6.81	5.32
<63 µm (silt and clay)	5.76	11.19	8.67	5.26
On-reef sediment constituent abundance (%)				
Coral	81.25	81.25	82.50	79.17
Crustose coralline algae	6.67	7.50	5.83	10.00
Halimeda	4.58	2.08	3.33	2.50
Mollusc	1.25	3.75	4.58	2.08
Benthic foraminifera	4.17	4.17	3.33	2.08
Echinoid test/spines	0.00	0.00	0.00	1.25
Other/unidentified	2.08	1.25	0.42	2.92
Lower beachface sediment constituent abundance (%)				
Coral	82.30	80.00	77.92	77.14
Crustose coralline algae	8.61	7.14	9.17	10.95
Halimeda	4.31	2.86	4.17	1.43
Mollusc	2.39	6.19	2.92	3.33
Benthic foraminifera	1.44	1.43	5.00	4.76
Echinoid test/spines	0.00	0.00	0.83	0.48
Other/unidentified	0.96	2.38	0.00	1.90

	Ile de la Passe (lagoonward)	Ile de la Passe (seaward)	Ile Anglaise (lagoonward)	Ile Anglaise (seaward)
Upper beachface sediment constituent abundance (%)				
Coral	77.62	79.52	71.90	82.38
Crustose coralline algae	8.10	6.19	9.52	6.19
Halimeda	1.43	3.81	4.29	1.90
Mollusc	2.86	3.33	2.86	4.76
Benthic foraminifera	7.62	4.76	8.57	0.00
Echinoid test/spines	0.00	0.00	0.95	0.48
Other/unidentified	2.38	2.38	1.90	4.29
Measured on-reef sediment grain-size contributions by size class (%)				
>4 mm (pebble)	0.13	4.81	4.71	4.27
2-4 mm (gravel)	0.18	6.81	7.74	8.36
1-2 mm (very coarse sand)	0.31	12.87	13.02	18.44
0.5-1 mm (coarse sand)	3.09	23.71	13.22	21.34
0.25-0.5 mm (medium sand)	13.91	27.51	16.60	24.06
0.125-0.25 mm (fine sand)	24.05	16.56	22.56	13.50
63 µm to 0.125 mm (very fine sand)	41.33	6.79	14.62	8.29
<63 µm (silt and clay)	15.00	0.75	6.10	1.42
Measured lower beachface sediment grain-size contributions by size class (%)				
>4 mm (pebble)	0.01	0.03	0.64	2.44
2-4 mm (gravel)	0.17	0.05	0.23	3.19
1-2 mm (very coarse sand)	0.17	0.09	1.13	11.79
0.5-1 mm (coarse sand)	0.39	0.49	0.27	16.31
0.25-0.5 mm (medium sand)	4.20	5.05	0.73	34.69
0.125-0.25 mm (fine sand)	71.71	73.21	63.19	30.61
63 µm to 0.125 mm (very fine sand)	23.29	20.73	32.30	0.95
<63 µm (silt and clay)	0.07	0.34	1.48	0.01
Measured upper beachface sediment grain-size contributions by size class (%)				
>4 mm (pebble)	5.98	0.61	0.44	0.23
2-4 mm (gravel)	3.48	0.82	0.12	0.58
1-2 mm (very coarse sand)	22.41	8.09	1.16	0.81
0.5-1 mm (coarse sand)	0.79	2.77	0.42	1.35
0.25-0.5 mm (medium sand)	2.75	17.61	2.65	20.32
0.125-0.25 mm (fine sand)	45.98	48.02	83.97	75.33
63 µm to 0.125 mm (very fine sand)	18.50	21.99	10.33	1.37
<63 µm (silt and clay)	0.11	0.09	0.90	0.01

[1] SedBudget based estimates

[2] Based on sediment sample thin-section analysis

[3] Based on sediment samples grain-size analysis from sieving