

Table S1. Data collected in the time-series investigation at the coral reef Station CT (latitude: 18.2124; longitude: 109.4744) in Sanva Bay in February 6-13, 2012.

Sampling time	Depth	Nutrients					<sup>228</sup> Ra		
		Salinity	Nitrite	Nitrate	Phosphate	Silicate	NO <sub>x</sub>	Sampling time	<sup>228</sup> Ra
yyyy-mm-dd	m				μM		yyyy-mm-dd	dpm 100L <sup>-1</sup>	
2012/2/6 15:13	1.2611	33.62	0.247	0.547	0.132	5.904	0.794	2012/2/6 15:16	27.75
2012/2/6 17:58	1.6264	33.61	0.347	1.373	0.217	6.056	1.720	2012/2/6 18:10	29.77
2012/2/6 21:00	2.0078	33.65	0.354	0.673	0.130	5.871	1.027	2012/2/6 21:02	26.26
2012/2/7 0:00	1.7891	33.65	0.349	0.611	0.110	5.934	0.960	2012/2/6 23:55	27.02
2012/2/7 3:00	1.1051	33.60	0.235	0.642	0.148	5.777	0.877	2012/2/7 3:02	26.27
2012/2/7 6:02	0.7047	33.50	0.107	0.880	0.181	5.113	0.987	2012/2/7 6:04	35.23
2012/2/7 8:00	0.8203	33.47	0.124	0.958	0.181	5.564	1.082	2012/2/7 8:02	38.74
2012/2/7 10:00	1.0194	33.50	0.191	1.202	0.204	6.338	1.393	2012/2/7 10:00	36.31
2012/2/7 12:02	1.1363	33.57	0.227	1.440	0.194	6.375	1.667	2012/2/7 12:04	33.28
2012/2/7 14:00	1.1286	33.59	0.194	1.071	0.186	7.019	1.265	2012/2/7 14:02	41.35
2012/2/7 15:57	1.1476	33.62	0.162	0.972	0.219	6.842	1.134	2012/2/7 16:00	22.96
2012/2/7 18:00	1.4370	33.63	0.158	1.912	0.160	5.888	2.070	2012/2/7 18:05	13.98
2012/2/7 20:00	1.8260	33.65	0.266	0.370	0.110	6.174	0.636	2012/2/7 20:02	16.90
2012/2/7 22:00	2.0721	33.64	0.248	0.447	0.100	5.894	0.695	2012/2/7 22:02	26.01
2012/2/8 0:00	1.9841	33.63	0.245	0.449	0.107	5.839	0.694	2012/2/8 0:02	26.29
2012/2/8 2:00	1.5808	33.63	0.282	0.500	0.124	6.122	0.782	2012/2/8 2:06	31.68
2012/2/8 4:05	1.0926	33.61	0.264	0.912	0.135	5.616	1.176	2012/2/8 4:04	29.67
2012/2/8 5:58	0.8167	33.63	0.155	0.744	0.168	5.207	0.899	2012/2/8 6:02	39.86
2012/2/8 9:00	1.0519	33.49	0.175	1.342	0.196	7.135	1.517	2012/2/8 9:00	45.28
2012/2/8 12:00	1.3462	33.64	0.199	0.830	0.139	6.882	1.029	2012/2/8 12:01	33.78
2012/2/8 15:00	1.2829	33.61	0.163	0.774	0.196	6.094	0.937	2012/2/8 14:58	35.32
2012/2/8 18:00	1.4010	33.63	0.406	1.010	0.189	5.424	1.416	2012/2/8 18:02	29.62
2012/2/8 21:05	1.9859	33.67	0.583	0.710	0.135	4.898	1.293	2012/2/8 21:02	25.60
2012/2/9 0:00	2.1465	33.66	0.623	0.682	0.133	5.485	1.305	2012/2/9 0:02	32.32
2012/2/9 3:00	1.6791	33.57	0.615	0.806	0.139	5.110	1.421	2012/2/9 3:02	27.23
2012/2/9 6:00	1.0887	33.58	0.363	0.980	0.162	4.678	1.343	2012/2/9 6:02	27.21
2012/2/9 9:00	1.2258	33.57	0.320	1.121	0.170	4.988	1.441	2012/2/9 9:02	29.05
2012/2/9 12:00	1.5989	33.45	0.321	1.083	0.159	7.251	1.404	2012/2/9 12:02	38.82
2012/2/9 15:02	1.4530	33.60	0.367	0.957	0.152	5.462	1.324	2012/2/9 15:02	27.94
2012/2/9 18:04	1.3926	33.59	0.405	1.088	0.170	5.248	1.493	2012/2/9 18:02	29.28
2012/2/9 21:00	1.8400	33.57	0.541	1.069	0.146	4.588	1.610	2012/2/9 21:02	25.63
2012/2/10 0:00	2.0494	33.65	0.712	0.803	0.133	4.570	1.515	2012/2/10 0:02	24.32
2012/2/10 3:00	1.6602	33.65	0.741	0.837	0.129	5.205	1.578	2012/2/10 3:04	23.71
2012/2/10 6:08	1.0035	33.65	0.563	0.980	0.140	4.740	1.543	2012/2/10 6:06	25.62
2012/2/10 9:05	1.1413	33.64	0.420	1.026	0.146	5.047	1.446	2012/2/10 9:06	25.31
2012/2/10 12:00	1.5075	33.63	0.488	0.927	0.141	5.043	1.415	2012/2/10 12:02	27.62
2012/2/10 15:00	1.3977	33.64	0.623	0.911	0.149	5.282	1.534	2012/2/10 15:02	25.97
2012/2/10 18:05	1.1377	33.65	0.396	1.162	0.164	4.553	1.558	2012/2/10 18:10	23.99
2012/2/10 21:10	1.4732	33.65	0.445	1.317	0.178	4.699	1.762	2012/2/10 21:12	24.69
2012/2/11 0:05	1.8800	33.647	0.546	0.942	0.142	5.589	1.488	2012/2/11 0:05	29.02
2012/2/11 3:11	1.7242	33.65	0.616	0.711	0.106	4.537	1.327	2012/2/11 3:12	23.88
2012/2/11 6:02	1.2086	33.64	0.516	0.787	0.117	4.521	1.303	2012/2/11 6:03	22.84
2012/2/11 9:05	1.1170	33.598	0.364	0.948	0.129	4.500	1.312	2012/2/11 9:08	25.75
2012/2/11 12:10	1.5433	33.595	0.381	0.867	0.129	4.731	1.248	2012/2/11 12:02	27.36
2012/2/11 15:03	1.5057	33.591	0.477	0.787	0.128	5.330	1.264	2012/2/11 15:03	25.50
2012/2/11 18:00	1.1649	33.622	0.319	0.928	0.132	4.511	1.247	2012/2/11 18:02	31.28
2012/2/11 20:00	1.1295	33.616	0.275	1.061	0.130	4.021	1.336	2012/2/11 22:03	29.07
2012/2/11 22:00	1.4023	33.571	0.425	1.031	0.153	5.305	1.456	2012/2/12 0:02	27.12
2012/2/12 0:00	1.7078	33.625	0.573	0.754	0.125	4.921	1.327	2012/2/12 2:02	24.14
2012/2/12 2:00	1.8072	33.662	0.542	0.555	0.103	4.345	1.097	2012/2/12 4:02	24.95
2012/2/12 4:00	1.6096	33.659	0.573	0.526	0.100	4.981	1.099	2012/2/12 6:02	26.16
2012/2/12 7:58	1.1778	33.654	0.366	0.635	0.102	4.592	1.001	2012/2/12 7:58	22.51
2012/2/12 10:00	1.3227	33.635	0.260	0.439	0.102	4.174	0.699	2012/2/12 10:02	22.17
2012/2/12 12:00	1.6063	33.623	0.255	0.394	0.096	4.434	0.649	2012/2/12 12:03	26.86
2012/2/12 13:58	1.8009	33.630	0.262	0.369	0.092	4.134	0.631	2012/2/12 13:59	26.02
2012/2/12 16:00	1.6299	33.630	0.228	0.272	0.084	3.954	0.500	2012/2/12 16:02	25.04
2012/2/12 18:00	1.3690	33.639	0.197	0.303	0.086	4.009	0.500	2012/2/12 18:00	24.66
2012/2/12 20:03	1.1454	33.637	0.118	0.396	0.101	3.133	0.514	2012/2/12 20:02	29.72
2012/2/12 22:00	1.2353	33.630	0.123	0.406	0.104	2.894	0.529	2012/2/12 22:02	32.72
2012/2/13 0:00	1.4703	33.574	0.403	0.578	0.111	4.486	0.981	2012/2/13 0:02	29.42
2012/2/13 3:00	1.6848	33.615	0.321	0.397	0.112	3.486	0.718	2012/2/13 3:01	27.13
2012/2/13 6:00	1.3632	33.637	0.335	0.405	0.090	3.662	0.740	2012/2/13 6:04	24.37