

Supplementary Material for

Organic Carbon Concentrations in High- and Low-Productivity Areas of the Sulu Sea

Charissa M. Ferrera^{1,*}, Gil S. Jacinto¹, Chen-Tung Arthur Chen², Hon-Kit Lui^{2,3}

¹Marine Science Institute, University of the Philippines, Diliman, Quezon City 1101, Philippines

²Department of Oceanography, National Sun Yat-sen University, Kaohsiung 80424 Taiwan, R.O.C.

³Taiwan Ocean Research Institute, National Applied Research Laboratories, Kaohsiung 80143 Taiwan, R.O.C.

Table S1. Average DOC and POC concentrations in the South China Sea and Sulu Sea.

Station		DOC, μM	<i>n</i>	POC, $\mu\text{g L}^{-1}$ (μM)	<i>n</i>
<i>South China Sea</i>					
1	within MLD (72 m)	74.6 ± 2.9	5	46.2 ± 7.9 (3.8 ± 0.7)	5
	upper 200 m	68.1 ± 7.8	10	45.9 ± 15.0 (3.8 ± 1.3)	10
	300–1000 m	51.9 ± 4.5	5	34.6 ± 5.5 (3.0 ± 0.5)	5
	1300–2000 m	48.0 ± 8.4	3		
<i>Sulu Sea, Low Productivity</i>					
16	within MLD (52 m)	71.3 ± 4.4	3	40.5 ± 5.4 (3.4 ± 0.4)	4
	upper 200 m	61.4 ± 9.1	8	38.5 ± 5.4 (3.2 ± 0.5)	10
	300–1000 m	48.8 ± 3.3	6	37.0 ± 5.5 (3.1 ± 0.5)	6
24	within MLD (50 m)	77.0 ± 8.4	4	68.2 ± 8.1 (5.7 ± 0.7)	4
	upper 200 m	64.0 ± 13.0	10	51.5 ± 17.3 (4.3 ± 1.4)	9
	300–1000 m	43.5 ± 3.5	7	36.0 ± 3.2 (3.0 ± 0.3)	6
79	within MLD (52 m)	59.7 ± 7.9	2	45.3 ± 9.1 (3.8 ± 0.8)	3
	upper 200 m	54.2 ± 7.2	5	39.5 ± 8.6 (3.3 ± 0.7)	6
	300–1000 m	49.2 ± 2.8	5	28.4 ± 5.0 (2.4 ± 0.4)	5
	1500–3700 m	46.0 ± 3.2	5	23.5 ± 3.2 (2.0 ± 0.3)	5
<i>Sulu Sea, High Productivity</i>					
26	within MLD (70 m)	72.4 ± 2.4	5	49.8 ± 5.0 (4.2 ± 0.4)	5
	upper 200 m	66.4 ± 7.3	10	45.8 ± 7.3 (3.8 ± 0.6)	10
	300–1200 m	49.4 ± 4.4	7	24.0 ± 16.6 (2.0 ± 1.4)	6
28	within MLD (50 m)	67.0 ± 3.5	4	53.2 ± 11.9 (4.4 ± 1.0)	4
	upper 200 m	60.6 ± 7.3	10	37.2 ± 18.4 (3.1 ± 1.5)	9
	300–700 m	46.8 ± 2.2	5	24.8 ± 11.1 (2.1 ± 0.9)	5
77	within MLD (38 m)	77.0 ± 1.1	3	55.3 ± 6.8 (4.6 ± 0.6)	3
	upper 200 m	69.8 ± 8.3	8	43.4 ± 12.4 (3.6 ± 1.0)	8
	300–1000 m	55.8 ± 2.6	4	25.8 ± 3.3 (2.2 ± 0.3)	5
	1500–4000 m	48.7 ± 3.3	5	34.8 ± 4.2 (2.9 ± 0.4)	5

n = number of sampling depths

Table S2. Linear relationships of POC and DOC, and POC and DOC with AOU.

Station	POC–DOC surface to 200 m			POC–DOC 300 m to 1000 m		
	Slope	r^2 (p value)	n	Slope	r^2 (p value)	n
<i>South China Sea</i>						
1	0.062	0.15 (0.274)	10	-0.054	0.28 (0.360)	5
<i>Sulu Sea, Low Productivity</i>						
16	0.008	0.03 (0.664)	8	-0.007	0.00 (0.926)	6
24	0.076	0.51 (0.030*)	9	0.005	0.01 (0.893)	6
79	0.061	0.31 (0.326)	5	0.138	0.83 (0.030*)	5
<i>Sulu Sea, High Productivity</i>						
26	0.039	0.21 (0.178)	10	0.157	0.21 (0.363)	6
28	0.182	0.84 (0.001*)	9	-0.213	0.25 (0.390)	5
77	0.111	0.80 (0.003*)	8	-0.106	0.82 (0.096)	4
POC–AOU below MLD to 1000 m			DOC–AOU below MLD to 1000 m			
<i>South China Sea</i>						
1	-0.001	0.00 (0.910)	9	-0.095	0.66 (0.008*)	9
<i>Sulu Sea, Low Productivity</i>						
16	0.002	0.03 (0.636)	11	-0.068	0.56 (0.013*)	10
24	-0.001	0.00 (0.888)	9	-0.120	0.59 (0.010*)	10
79	-0.003	0.15 (0.341)	8	-0.021	0.08 (0.498)	8
<i>Sulu Sea, High Productivity</i>						
26	-0.012	0.18 (0.214)	10	-0.121	0.79 (0.001*)	10
28	-0.003	0.03 (0.605)	10	-0.100	0.78 (0.001*)	10
77	-0.009	0.73 (0.007*)	8	-0.066	0.55 (0.036*)	8

* $p < 0.05$