***Electronic supplementary material Wimalasiri et al.***

**Spatial patterns and key drivers of zooplankton in the north central Indian Ocean**

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Table SI. Zooplankton biomass (g dry wt. m-2; g dry wt. m-3) for the three-depth intervals (~ 30 m, ~ 100 m, ~ 200 m)

 sampled during 24th June – 16th July 2018. Running station numbers used in Figure 1 and Figure 11 are given in parenthesis.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   |   |   |   |   |   |   |   |   |   |   |   |
| Station | Year | Month | Day | Time (GMT) | Lat. (°N) | Lon.(°E) | Bottom depth (m) | Sampling | g dry wt. m-2 | g dry wt. m-3 | Polygon name |
| depth (m) |
| 463 (1) | 2018 | 6 | 26 | 528 | 10.281 | 80.715 | 986 | 30 | 0.218 | 0.007 | NE\_deep |
| 466 (2) | 2018 | 6 | 26 | 1125 | 10.194 | 80.475 | 95 | 30 | 0.16 | 0.005 | NE\_shelf |
| 468 (3) | 2018 | 6 | 26 | 1510 | 10.134 | 80.336 | 30 | 30 | 1.072 | 0.036 | NE\_shelf |
| 485 (4) | 2018 | 6 | 28 | 1450 | 9.35 | 81.075 | 1060 | 30 | 0.11 | 0.004 | CE\_deep |
| 487 (5) | 2018 | 6 | 28 | 1740 | 9.329 | 81.014 | 101 | 30 | 0.297 | 0.01 | CE\_shelf |
| 488 (6) | 2018 | 6 | 28 | 2050 | 9.295 | 80.922 | 31 | 30 | 0.705 | 0.023 | CE\_shelf |
| 498 (7) | 2018 | 6 | 30 | 557 | 8.468 | 81.542 | 1001 | 30 | 0.378 | 0.013 | CE\_deep |
| 499 (8) | 2018 | 6 | 30 | 812 | 8.449 | 81.506 | 76 | 30 | 0.648 | 0.022 | CE\_shelf |
| 500 (9) | 2018 | 6 | 30 | 1050 | 8.414 | 81.441 | 27 | 20 | 0.499 | 0.025 | CE\_shelf |
| 511 (10) | 2018 | 7 | 1 | 2030 | 7.551 | 82.007 | 1029 | 30 | 0.165 | 0.005 | SE\_deep |
| 513 (11) | 2018 | 7 | 2 | 20 | 7.531 | 81.898 | 148 | 30 | 0.542 | 0.018 | SE\_shelf |
| 514 (12) | 2018 | 7 | 2 | 200 | 7.524 | 81.855 | 31 | 30 | 0.821 | 0.027 | SE\_shelf |
| 524 (13) | 2018 | 7 | 3 | 1345 | 6.563 | 82.007 | 998 | 30 | 0.578 | 0.019 | SE\_deep |
| 525 (14) | 2018 | 7 | 3 | 1555 | 6.582 | 81.956 | 94 | 30 | 0.915 | 0.031 | SE\_shelf |
| 527 (15) | 2018 | 7 | 3 | 1755 | 6.604 | 81.862 | 36 | 30 | 1.507 | 0.05 | SE\_shelf |
| 537 (16) | 2018 | 7 | 5 | 415 | 5.802 | 81.212 | 1002 | 30 | 1.388 | 0.046 | S\_deep |
| 540 (17) | 2018 | 7 | 5 | 835 | 5.901 | 81.175 | 163 | 30 | 1.528 | 0.051 | S\_shelf |
| 542 (18) | 2018 | 7 | 5 | 1200 | 6.081 | 81.075 | 30 | 25 | 1.15 | 0.046 | S\_shelf |
| 552 (19) | 2018 | 7 | 6 | 2000 | 5.781 | 80.118 | 1102 | 30 | 1.478 | 0.049 | SW\_deep |
| 554 (20) | 2018 | 7 | 6 | 2300 | 5.829 | 80.141 | 111 | 30 | 1.474 | 0.049 | SW\_shelf |
| 556 (21) | 2018 | 7 | 7 | 450 | 5.986 | 80.253 | 38 | 30 | 1.772 | 0.059 | SW\_shelf |
| 564 (22) | 2018 | 7 | 9 | 435 | 6.654 | 79.689 | 1103 | 30 | 2.052 | 0.068 | SW\_deep |
| 566 (23) | 2018 | 7 | 9 | 800 | 6.648 | 79.731 | 159 | 30 | 1.262 | 0.042 | SW\_shelf |
| 568 (24) | 2018 | 7 | 9 | 1425 | 6.653 | 79.853 | 30 | 28 | 2.634 | 0.094 | SW\_shelf |
| 574 (26) | 2018 | 7 | 11 | 335 | 7.678 | 79.577 | 1056 | 30 | 0.917 | 0.031 | NW\_deep |
| 576 (27) | 2018 | 7 | 11 | 640 | 7.67 | 79.624 | 38 | 30 | 0.856 | 0.029 | NW\_shelf |
| 578 (28) | 2018 | 7 | 12 | 1640 | 8.833 | 79.531 | 32 | 30 | 0.361 | 0.012 | NW\_shelf |
| 582 (29) | 2018 | 7 | 12 | 2058 | 8.637 | 79.346 | 1542 | 30 | 1.182 | 0.039 | NW\_deep |
| 586 (30) | 2018 | 7 | 13 | 510 | 8.249 | 78.937 | 1542 | 30 | 2.214 | 0.074 | NW\_deep |
| 589 (31) | 2018 | 7 | 13 | 1258 | 7.754 | 78.932 | 2184 | 30 | 2.075 | 0.069 | NW\_deep |
| 595 (25) | 2018 | 7 | 14 | 1035 | 6.672 | 78.931 | 2627 | 30 | 1.834 | 0.061 | SW\_deep |
| 463 | 2018 | 6 | 26 | 525 | 10.281 | 80.715 | 986 | 200 | 0.855 | 0.004 | NE\_deep |
| 466 | 2018 | 6 | 26 | 1130 | 10.194 | 80.475 | 95 | 90 | 1.202 | 0.013 | NE\_shelf |
| 487 | 2018 | 6 | 28 | 1745 | 9.329 | 81.014 | 101 | 100 | 1.213 | 0.012 | CE\_shelf |
| 498 | 2018 | 6 | 30 | 600 | 8.468 | 81.542 | 1001 | 200 | 1.435 | 0.007 | CE\_deep |
| 499 | 2018 | 6 | 30 | 815 | 8.449 | 81.506 | 76 | 70 | 1.043 | 0.015 | CE\_shelf |
| 511 | 2018 | 7 | 1 | 2035 | 7.551 | 82.007 | 1029 | 200 | 0.81 | 0.004 | SE\_deep |
| 513 | 2018 | 7 | 2 | 25 | 7.531 | 81.898 | 148 | 100 | 1.782 | 0.018 | SE\_shelf |
| 524 | 2018 | 7 | 3 | 1347 | 6.563 | 82.007 | 998 | 200 | 2.52 | 0.013 | SE\_deep |
| 525 | 2018 | 7 | 3 | 1605 | 6.582 | 81.956 | 94 | 94 | 2.624 | 0.028 | SE\_shelf |
| 537 | 2018 | 7 | 5 | 420 | 5.802 | 81.212 | 1002 | 200 | 4.302 | 0.342 | S\_deep |
| 540 | 2018 | 7 | 5 | 840 | 5.901 | 81.175 | 163 | 100 | 2.456 | 0.025 | S\_shelf |
| 552 | 2018 | 7 | 6 | 2010 | 5.781 | 80.118 | 1102 | 200 | 2.866 | 0.014 | SW\_deep |
| 554 | 2018 | 7 | 6 | 2310 | 5.829 | 80.141 | 111 | 100 | 1.928 | 0.019 | SW\_shelf |
| 564 | 2018 | 7 | 9 | 440 | 6.654 | 79.689 | 1103 | 200 | 3.32 | 0.017 | SW\_deep |
| 566 | 2018 | 7 | 9 | 805 | 6.648 | 79.731 | 159 | 100 | 2.571 | 0.026 | SW\_shelf |
| 574 | 2018 | 7 | 11 | 338 | 7.678 | 79.577 | 1056 | 200 | 2.336 | 0.012 | NW\_deep |
| 582 | 2018 | 7 | 12 | 2110 | 8.249 | 78.937 | 1542 | 200 | 1.998 | 0.01 | NW\_deep |
| 586 | 2018 | 7 | 13 | 515 | 8.249 | 78.937 | 1542 | 200 | 1.33 | 0.007 | NW\_deep |
| 589 | 2018 | 7 | 13 | 1300 | 7.754 | 78.932 | 2184 | 200 | 3.09 | 0.015 | NW\_deep |
| 595 | 2018 | 7 | 14 | 1040 | 6.672 | 78.931 | 2627 | 200 | 6.451 | 0.032 | SW\_deep |

Table SII. Zooplankton abundance (ind. m-3) and biomass (g dry wt. m-2) in the upper 30 m at different regions: NE=North East, CE= Central East, SE=South East, S=South, SW=South West, NW=North West. The total zooplankton biomass and the three size fractions, large (>2000µm), medium (1000-2000µm) and small (180-1000µm) are given.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   |   |   |   |   |   |   |   |   |   |   |
| Region  | Abundance  | SD | Total biomass | SD | >2000 µm | SD | 1000-2000 µm  | SD | 180-1000 µm  | SD |
| NE | 229 | 160.04 | 0.483 | 0.295 | 0.000 | 0.000 | 0.227 | 0.199 | 0.256 | 0.099 |
| CE | 711 | 490.95 | 0.439 | 0.091 | 0.002 | 0.002 | 0.191 | 0.049 | 0.246 | 0.069 |
| SE | 943 | 345.98 | 0.755 | 0.184 | 0.104 | 0.061 | 0.162 | 0.049 | 0.489 | 0.136 |
| S | 1534 | 804.32 | 1.355 | 0.110 | 0.243 | 0.138 | 0.378 | 0.192 | 0.735 | 0.128 |
| SW | 1895 | 856.25 | 1.787 | 0.173 | 0.124 | 0.070 | 0.347 | 0.058 | 1.316 | 0.232 |
| NW | 1931 | 767.63 | 1.267 | 0.298 | 0.248 | 0.248 | 0.390 | 0.150 | 0.629 | 0.186 |
|  |  |  |  |  |  |  |  |  |  |  |

Figure S1. Images of dominant zooplankton groups observed in the upper 30 m in Sri Lankan waters, during 24th June – 16th July 2018. (a) *Euchaeta* spp. (b) *Acrocalanus* spp. (c) *Pontellina plumata* (d) *Candacia* spp. (e)*Miracia* spp. (f) *Eucalanus* spp. (g) *Macrosetella* spp. and (h) Krill. All images courtesy of Mr. M.I.G. Rathnasuriya.



0.5 mm

0.5 mm

0.5 mm

0.5 mm

0.5 mm

0.5 mm

(f)

(e)

(d)

(c)

(b)

(a)



1 mm

0.3 mm

(g)

(h)