**Supplemental material**

**Surveying seaweeds from the Ulvales and Fucales in the world´s most frequently used artificial waterway, the Kiel Canal**

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**Supplemental Table S 1:** Measured values of salinity (May 2016), mean SiO4, mean PO4, Mean DIN (February 2018) for all sampling sites in the Kiel Canal (1-16) and reference sites outside the canal (17-19) examined in this study

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sampling site** | **Salinity**  | **Geographic coordinates (N)** | **Geographic coordinates €** | **Mean SiO4 (µmol l-1)** | **Mean PO4 (µmol l-1)** | **Mean DIN (µmol l-1)** |
| C 1 Brunsbüttel Elbe estuary  | 1.2 | 53°53.3267 | 9°06.994 | 181.57 | 1.54 | 249.04 |
| 1 Brunsbüttel sluice gate outside | 3.4 | 53°53.321 | 9°08.669 | 190.11 | 1.68 | 246.80 |
| 2 Brunsbüttel sluice gate inside (S) | 3.7 | 53°53.841 | 9°09.394 | 155.78 | 1.89 | 189.58 |
| 3 Brunsbüttel sluice gate (N) | 3.8 | 53°53.875 | 9°08.915 | 171.10 | 1.93 | 196.69 |
| 4 Weiche Kudensee  | 2.7 | 53°56.665 | 9°13.475 | 144.63 | 2.53 | 167.72 |
| 5 Weiche Dückersbusch  | 2.5 | 54°01.916 | 9°18.010 | 142.34 | 1.95 | 175.35 |
| 6 Weiche Fischerhütte | 3.3 | 54°09.017 | 9°21.712 | 123.92 | 2.50 | 158.12 |
| 7 Weiche Olderbüttel  | 3.6 | 54°10.422 | 9°26.515 | 110.16 | 2.25 | 147.82 |
| 8 Weiche Breiholz  | 4.1 | 54°12.033 | 9°33.138 | 126.05 | 2.32 | 169.54 |
| 14 Weiche Schwartenbek  | 12.4 | 54°21.675 | 10°03.533 | 103.37 | 1.36 | 122.00 |
| 12 Weiche Nordsee | 9.2 | 54°20.583 | 9°57.482 | 106.49 | 1.54 | 159.33 |
| 10 Weiche Rade (S) | 6.8 | 54°20.708 | 9°45.666 | 145.06 | 1.81 | 130.71 |
| 9 WSA Rendsburg | 6 | 54°17.874 | 9°41.601 | 142.51 | 1.72 | 125.28 |
| 11 Weiche Rade (N) | 6.9 | 54°21.107 | 9°45.893 | 152.86 | 1.65 | 168.19 |
| 13 Warleberg  | 11.6 | 54°21.569 | 10°01.024 | 136.83 | 1.42 | 151.28 |
| 15 Knoop  | 12, 8 | 54°22.358 | 10°05.615 | 138.50 | 1.05 | 376.75 |
| 16 Holtenau | 13.8 | 54°22.146 | 10°07.495 | 122.61 | 1.22 | 124.41 |
| C 2 Holtenau ferry | 14.6 | 54°22.118 | 10°08.0424 | 68.84 | 0.84 | 65.76 |
| C 3 Holtenau sluice gate outside | 15.8 | 54° 22.1325 | 10°08.98177 | 92.29 | 0.92 | 71.52 |