**Table S6.**

**Regression lines of trends.**

Results for the linear regressions of selected parameters *vs* year to indicate possible trends Regressions were computed for those stations and parameters when the sampling covered at least 5 y with at least six sampling events and at least 50% of the samples had values >0. \*: not determined, ns: not significant, negative t indicated a negative slope. The significance level (α) is 0.05, but a Bonferroni correction is applied to this level of significance, because the parameters are derived from the same cores (Total above-ground biomass. Relative abundance of faster-growing seagrass, Relative abundance of faster growing fleshy algae, % Above-ground / total biomass for *Thalassia testudinum*) or quadrats (Productivity, Foliar shoot density of *T. testudinum*). The results of the regressions of foliar weight per shoot of *T. testudinum* is also given, to facilitate interpretations of the results, although this was not a parameter for potential degradation of the coastal environment.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Site** | **Sta-tion** | **Country/**  **Territory** |  | | **Community** | | | **Relative abundance of faster –growing plants** | | | | | | ***Thalassia testudinum*** | | | |
|  |  |  |  | | **Total above-ground biomass** | | | **Other seagrass** | | | **Fleshy Algae1** | | | **% Above-ground / total biomass** | | | |
|  |  |  | **df** | **α** | **slope** | **t** | **p** | **slope** | **t** | **p** | **slope** | **t** | **p** | **slope** | **t** | | **p** |
| **1** | **1** | Bermuda | 36 | 0.025 | -93.72 | -7.51 | 0.001 | \* | \* | \* | \* | \* | \* | -0.68 | | -6.13 | 0.001 |
|  | **2** |  | 31 | 0.025 | -63.84 | -3.45 | 0.002 | \* | \* | \* | \* | \* | \* | -0.53 | | -3.49 | 0.002 |
| **2** | **4** | USA2 | \* | \* | ns | -1.08 | 0.94 | \* | \* | \* | \* | \* | \* | \* | | \* | \* |
|  | **5** |  | \* | \* | 5.31 | 4.77 | 0.001 | \* | \* | \* | \* | \* | \* | \* | | \* | \* |
| **3** | **6** | Bahamas | 41 | 0.017 | ns | 1.82 | 0.076 | ns | 2.34 | 0.024 | \* | \* | \* | ns | | -1.50 | 0.141 |
|  | **7** |  | 41 | 0.017 | ns | -0.52 | 0.605 | -0.93 | -2.72 | 0.010 | ns | -1.26 | 0.216 | ns | | -2.11 | 0.041 |
| **4** | **8** | Cuba | 59 | 0.025 | -5.27 | -2.60 | 0.012 | \* | \* | \* | \* | \* | \* | 0.78 | | 3.26 | 0.002 |
|  | **9** |  | 59 | 0.025 | -7.98 | -2.28 | 0.025 | \* | \* | \* | \* | \* | \* | 0.96 | | 2.94 | 0.005 |
| **5** | **10** | Mexico | 91 | 0.013 | ns | 0.88 | 0.380 | 1.30 | 5.86 | 0.001 | 0.01 | 4.12 | 0.001 | 0.12 | | 2.57 | 0.012 |
|  | **11** |  | 91 | 0.013 | 4.04 | 3.57 | 0.001 | ns | 0.27 | 0.791 | 0.02 | 6.45 | 0.001 | 0.21 | | 3.90 | 0.001 |
|  | **12** |  | 90 | 0.017 | ns | 1.39 | 0.169 | 0.56 | 4.26 | 0.001 | \* | \* | \* | 0.21 | | 5.54 | 0.001 |
|  | **13** |  | 76 | 0.013 | 8.68 | 2.58 | 0.010 | ns | 0.82 | 0.413 | ns | 1.99 | 0.072 | 0.24 | | 4.12 | 0.001 |
| **7** | **15** | Cayman Isl. | na | na | \* | \* | \* | \* | \* | \* | \* | \* | \* | \* | | \* | \* |
| **8** | **17** | Jamaica | 35 | 0.025 | 9.70 | 2.38 | 0.024 | \* | \* | \* | \* | \* | \* | 1.11 | | 2.02 | 0.050 |
| **10** | **21** | Puerto | 47 | 0.017 | 19.08 | 5.67 | 0.001 | \* | \* | \* | 0.75 | 2.79 | 0.002 | 0.88 | | 3.38 | 0.001 |
|  | **22** | Rico | 51 | 0.017 | ns | 1.86 | 0.069 | \* | \* | \* | ns | 0.22 | 0.823 | 0.90 | | 4.52 | 0.001 |
| **12** | **25** | Belize | 91 | 0.013 | ns | -0.84 | 0.403 | 0.57 | 4.82 | 0.001 | ns | 1.28 | 0.226 | 0.10 | | 6.16 | 0.001 |
|  | **26** |  | 71 | 0.013 | ns | -1.22 | 0.226 | ns | 2.09 | 0.042 | ns | -0.12 | 0.904 | 0.07 | | 2.99 | 0.004 |
| **13** | **29** | Old | 23 | 0.017 | ns | 1.95 | 0.064 | ns | 0.68 | 0.505 | \* | \* | \* | ns | | -1.04 | 0.310 |
|  | **30** | Providence | 23 | 0.017 | ns | 0.94 | 0.358 | -6.46 | -3.65 | 0.001 | \* | \* | \* | ns | | 0.40 | 0.694 |
|  | **31** |  | 23 | 0.017 | ns | 0.42 | 0.679 | ns | 0.41 | 0.684 | \* | \* | \* | ns | | 0.26 | 0.800 |
| **14** | **33** | Barbados3. | 34 | 0.017 | ns | -0.03 | 0.980 | 3.55 | 3.41 | 0.002 | \* | \* | \* | 0.74 | | 5.43 | 0.001 |
|  | **34** |  | 31 | 0.013 | ns | -1.31 | 0.200 | 0.84 | 2.75 | 0.010 | ns | 0.70 | 0.521 | 1.13 | | 5.32 | 0.001 |
| **15** | **37** | San Andres | 31 | 0.017 | ns | -0.79 | 0.438 | ns | -1.92 | 0.064 | \* | \* | \* | ns | | -0.46 | 0.650 |
|  | **38** |  | 31 | 0.017 | ns | -0.65 | 0.519 | ns | 0.94 | 0.357 | \* | \* | \* | ns | | 1.17 | 0.253 |
| **17** | **41** | Colombia | 47 | 0.025 | ns | -1.50 | 0.141 | \* | \* | \* | \* | \* | \* | ns | | 2.26 | 0.028 |
|  | **42** |  | 47 | 0.025 | ns | -1.16 | 0.251 | \* | \* | \* | \* | \* | \* | ns | | 2.23 | 0.030 |
| **18** | **43** | Tobago | 95 | 0.025 | ns | 0.89 | 0.377 | \* | \* | \* | \* | \* | \* | ns | | 0.82 | 0.417 |
|  | **44** |  | 69 | 0.025 | ns | -1.61 | 0.113 | \* | \* | \* | \* | \* | \* | ns | | 0.70 | 0.486 |
| **20** | **47** | Venezuela | 53 | 0.025 | 12.56 | 5.31 | 0.001 | \* | \* | \* | \* | \* | \* | 0.37 | | 2.31 | 0.025 |
|  | **48** |  | 39 | 0.025 | 25.23 | 4.20 | 0.001 | \* | \* | \* | \* | \* | \* | 1.22 | | 3.81 | 0.001 |
| **21** | **49** | Costa Rica | 15 | 0.025 | -8.00 | -2.53 | 0.023 | \* | \* | \* | \* | \* | \* | ns | | 0.61 | 0.550 |
|  | **50** |  | \* | \* | \* | \* | \* | \* | \* | \* | \* | \* | \* | \* | | \* | \* |
| **22** | **51** | Panama | 123 | 0.050 | 3.10 | 5.28 | 0.001 | \* | \* | \* | \* | \* | \* | \* | | \* | \* |
|  | **52** |  | 119 | 0.050 | 5.61 | 6.75 | 0.001 | \* | \* | \* | \* | \* | \* | \* | | \* | \* |

**Table S6 (continued)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Site** | **Sta-tion** | **Country/Territory** |  | | ***Thalassia testudinum*** | | | |  | | | | | | |
|  |  |  |  | | **Productivity** | | |  | **Foliar shoot density** | | | | **Dry weight per Shoot** | | |
|  |  |  | **df** | **Α** | **slope** | **t** | **p** | **df4.** | | **slope** | **t** | **p** | **slope** | **t** | **p** | |
| **1** | **1** | Bermuda | 87 | 0.025 | -0.11 | -5.67 | 0.001 | 75 | | 80.3 | 6.57 | 0.001 | -7.16 | -7.79 | 0.001 | |
|  | **2** |  | 74 | 0.025 | -0.24 | -9.76 | 0.001 | 63 | | -58.3 | -3.82 | 0.001 | -9.56 | -7.32 | 0.001 | |
| **2** | **4** | USA2 | 167 | 0.025 | ns | 0.64 | 0.525 | 167 | | ns | 1.61 | 0.109 | ns | -1.09 | 0.050 | |
|  | **5** |  | 164 | 0.025 | 0.05 | 2.76 | 0.022 | 164 | | 19.2 | 3.61 | 0.001 | 6.96 | 3.07 | 0.002 | |
| **3** | **6** | Bahamas | \* | na | \* | \* | \* | \* | | \* | \* | \* | \* | \* | \* | |
|  | **7** |  | \* | na | \* | \* | \* | \* | | \* | \* | \* | \* | \* | \* | |
| **4** | **8** | Cuba | 95 | 0.025 | ns | -1.88 | 0.063 | 82 | | -58.9 | -5.72 | 0.001 | 9.42 | 3.28 | 0.002 | |
|  | **9** |  | 101 | 0.025 | ns | 1.46 | 0.148 | 89 | | -36.3 | -3.79 | 0.001 | 10.13 | 4.11 | 0.001 | |
| **5** | **10** | Mexico | 178 | 0.025 | 0.04 | 3.19 | 0.002 | 178 | | 11.3 | 4.31 | 0.001 | 2.81 | 3.58 | 0.001 | |
|  | **11** |  | 173 | 0.025 | ns | 1.60 | 0.112 | 173 | | 8.9 | 2.92 | 0.004 | ns | -0.22 | 0.827 | |
|  | **12** |  | 163 | 0.025 | 0.02 | 2.79 | 0.006 | 163 | | ns | 1.16 | 0.249 | 0.89 | 3.34 | 0.001 | |
|  | **13** |  | 139 | 0.025 | ns | 0.99 | 0.324 | 139 | | ns | -1.54 | 0.126 | 3.15 | 3.87 | 0.001 | |
| **7** | **15** | Cayman Isl. | 35 | 0.025 | 0.43 | 5.30 | 0.001 | 35 | | -62.2 | -4.04 | 0.001 | 9.11 | 4.77 | 0.001 | |
| **8** | **17** | Jamaica | 34 | 0.050 | 0.26 | 2.17 | 0.037 | \* | | \* | \* | \* | \* | \* | \* | |
| **10** | **21** | Puerto | 47 | 0.025 | ns | 1.46 | 0.151 | 47 | | ns | 0.74 | 0.463 | ns | 0.93 | 0.358 | |
|  | **22** | Rico | 47 | 0.025 | ns | 0.64 | 0.524 | 47 | | ns | 1.84 | 0.072 | ns | 1.38 | 0.173 | |
| **12** | **25** | Belize | 167 | 0.025 | 0.06 | 4.505 | 0.001 | 155 | | -14.7 | -5.48 | 0.001 | 5.07 | 7.19 | 0.001 | |
|  | **26** |  | 115 | 0.025 | ns | 1.944 | 0.054 | 115 | | 18.0 | 5.18 | 0.001 | -1.27 | -2.37 | 0.020 | |
| **13** | **29** | Old | 34 | 0.025 | ns | -0.49 | 0.628 | ns | | 34 | -0.43 | 0.668 | ns | 0.15 | 0.880 | |
|  | **30** | Providence | 34 | 0.025 | ns | -1.89 | 0.068 | ns | | 34 | -0.90 | 0.377 | ns | 0.75 | 0.451 | |
|  | **31** |  | 29 | 0.025 | -0.31 | -3.131 | 0.004 | ns | | 29 | 1.26 | 0.217 | -24.9 | -2.60 | 0.015 | |
| **14** | **33** | Barbados3. | 63 | 0.025 | ns | -1.54 | 0.128 | 27 | | -59.6 | -3.24 | 0.003 | 25.33 | 4.32 | 0.001 | |
|  | **34** |  | 55 | 0.025 | ns | -1.27 | 0.210 | 23 | | \* | \* | \* | \* | \* | \* | |
| **15** | **37** | Colombia | 40 | 0.025 | ns | -1.25 | 0.230 | 40 | | 55.5 | 3.13 | 0.003 | -22.6 | -2.93 | 0.006 | |
|  | **38** |  | 37 | 0.025 | ns | -1.01 | 0.320 | 37 | | ns | 1.19 | 0.243 | ns | -2.14 | 0.039 | |
| **17** | **41** | Colombia | 71 | 0.025 | ns | -1.49 | 0.141 | 71 | | ns | 0.99 | 0.326 | -5.11 | -5.12 | 0.001 | |
|  | **42** |  | 71 | 0.025 | ns | -1.06 | 0.293 | 71 | | ns | 0.05 | 0.961 | ns | -1.34 | 0.186 | |
| **18** | **43** | Tobago | 201 | 0.025 | ns | 0.26 | 0.799 | 173 | | ns | -0.04 | 0.971 | ns | 0.59 | 0.558 | |
|  | **44** |  | 181 | 0.025 | -0.10 | -2.62 | 0.009 | 168 | | ns | 1.41 | 0.160 | -20.33 | -3.90 | 0.001 | |
| **20** | **47** | Venezuela | 59 | 0.050 | 0.24 | 6.98 | 0.001 | \* | | \* | \* | \* | \* | \* | \* | |
|  | **48** |  | 41 | 0.050 | 0.16 | 2.65 | 0.011 | \* | | \* | \* | \* | \* | \* | \* | |
| **21** | **49** | Costa Rica | 104 | 0.025 | -0.23 | -6.59 | 0.001 | 104 | | -42.9 | -2.96 | 0.004 | -3.89 | -4.44 | 0.001 | |
|  | **50** |  | 73 | 0.025 | -0.39 | -2.85 | 0.006 | 73 | | ns | -0.68 | 0.496 | ns | -1.34 | 0.186 | |
| **22** | **51** | Panama | 161 | 0.025 | ns | -0.49 | 0.622 | 161 | | ns | -0.36 | 0.717 | ns | 0.27 | 0.785 | |
|  | **52** |  | 164 | 0.025 | ns | 1.42 | 0.156 | 164 | | 32.88 | 6.97 | 0.001 | -1.94 | -3.71 | 0.001 | |

1. Distribution of the fleshy algae is irregular and samples were grouped per sampling time, 2. Above-ground biomass at site 2 was determined from leaf dry weight of the quadrat samples (α=0.025), 3. Trend for above-ground relative to total biomass was determined for *Syringodium filiforme*, because *Thalassia testudinum* disappeared in later years at this site, 4. Df for shoot density may be lower than the value for productivity because this parameter was included later in the protocol.