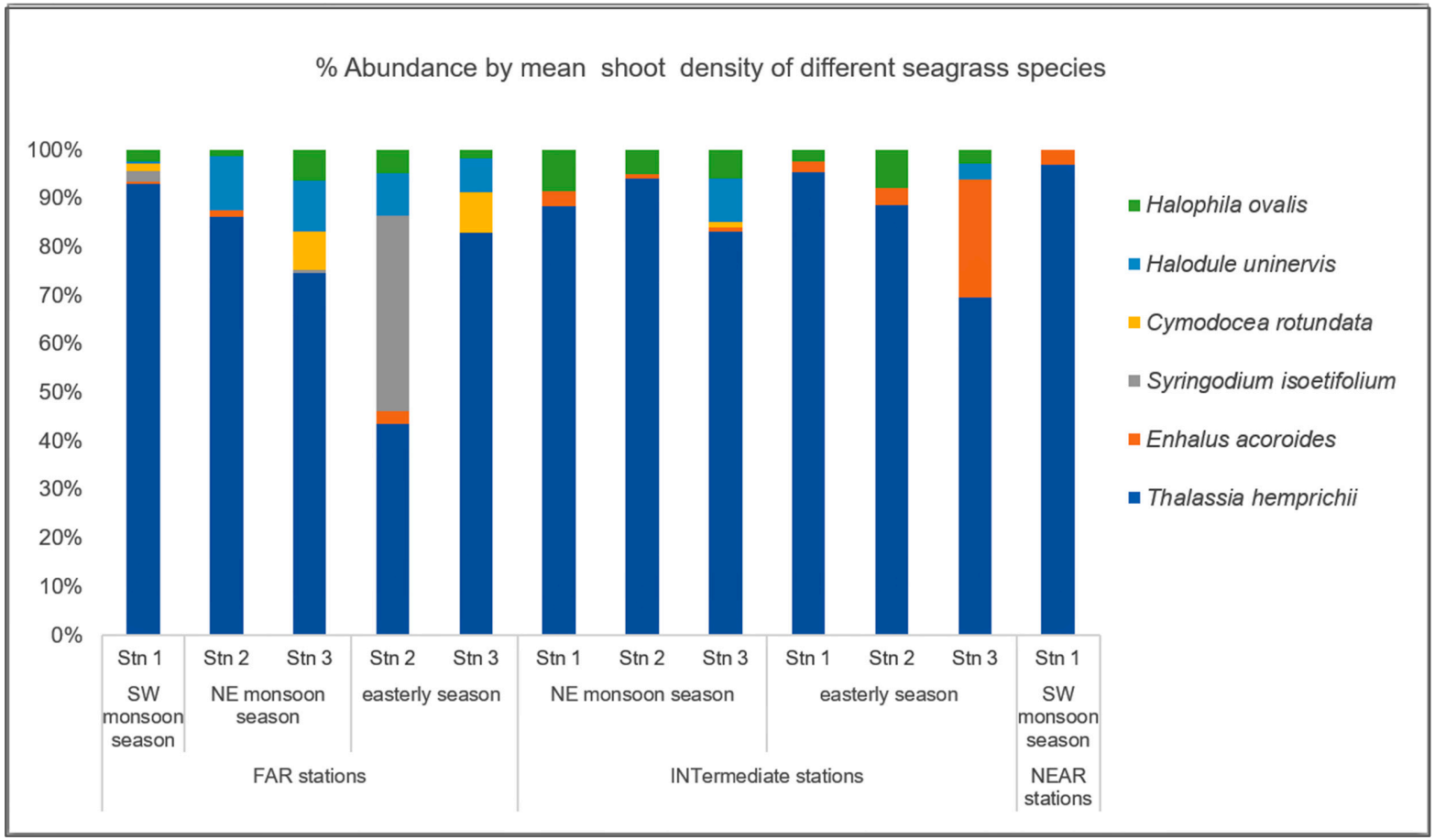
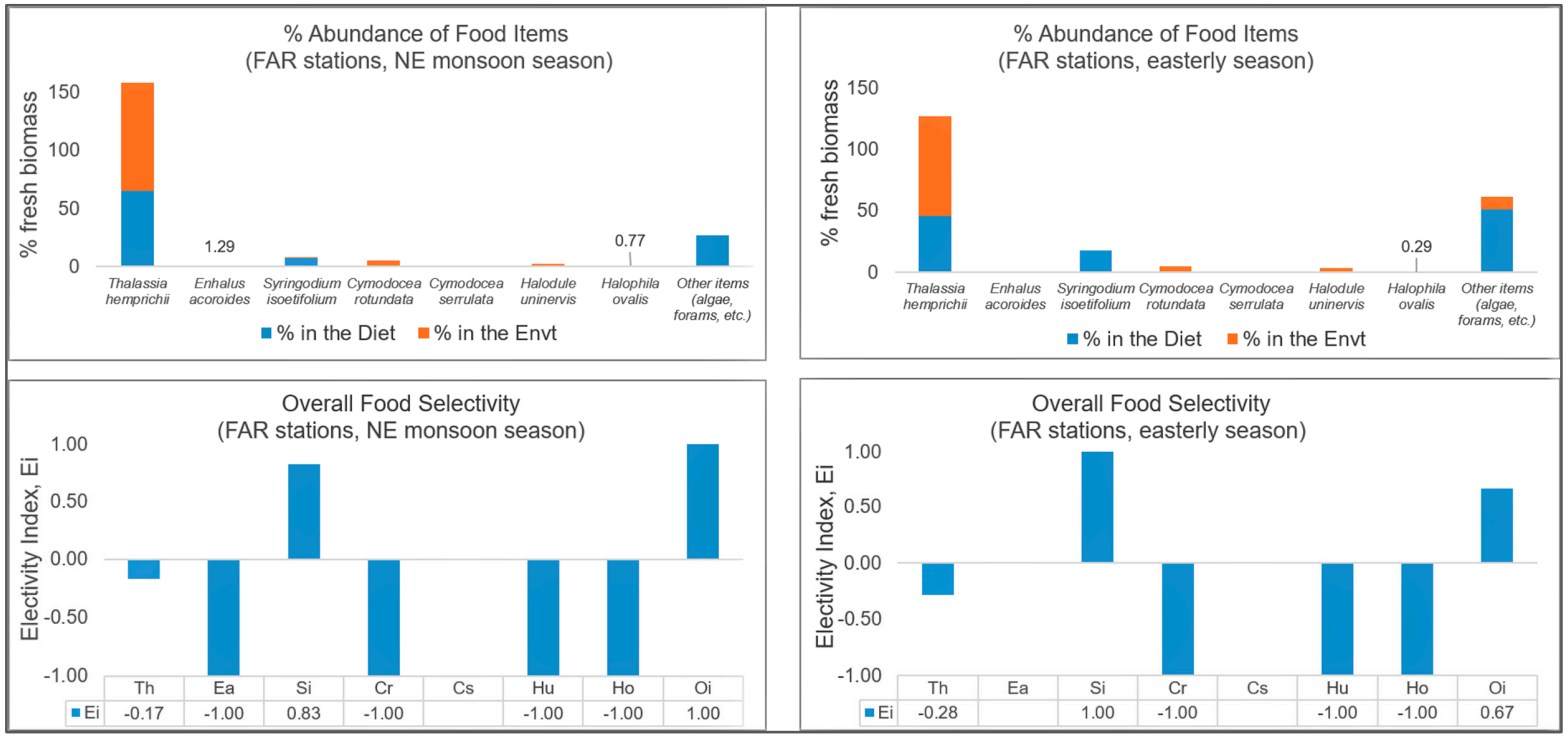
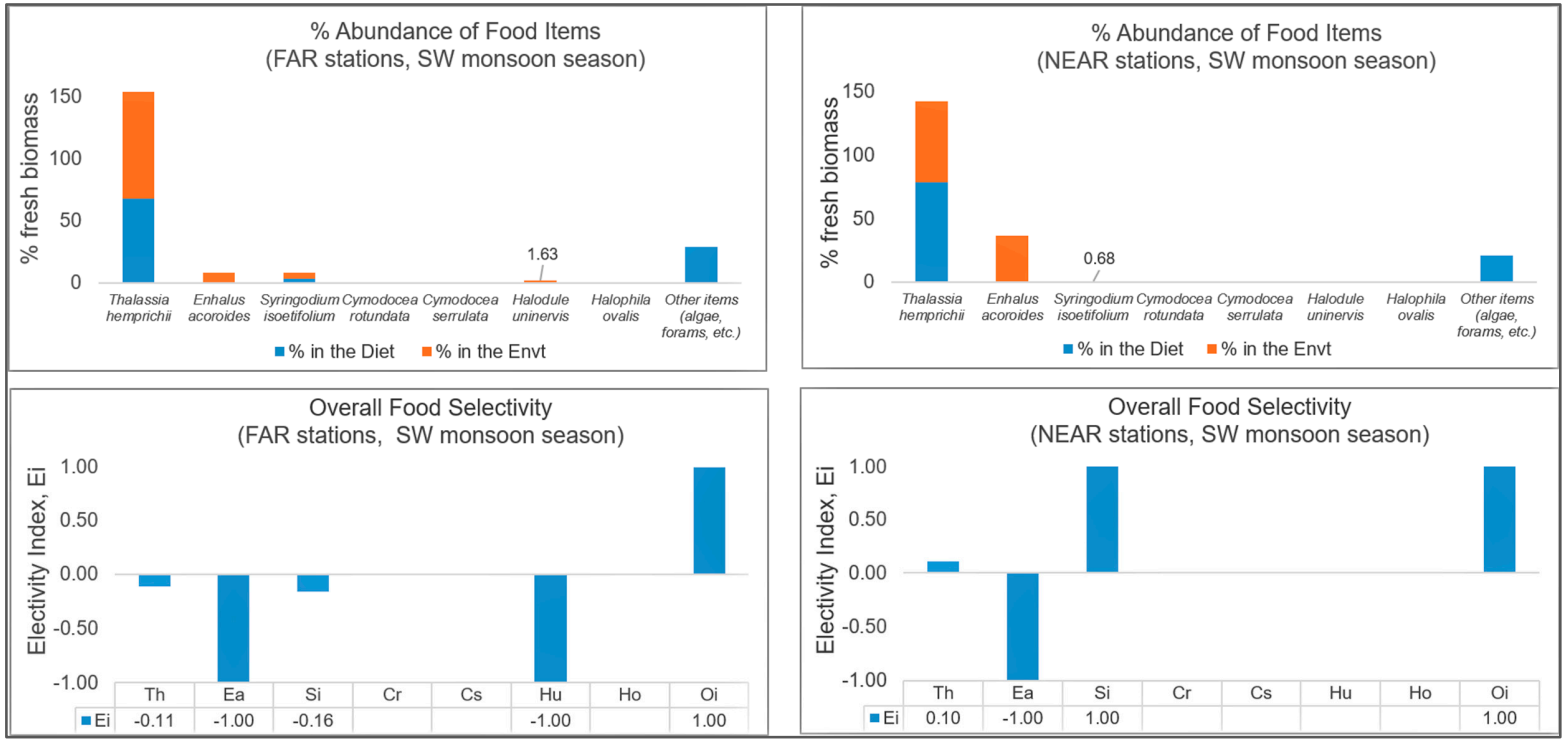


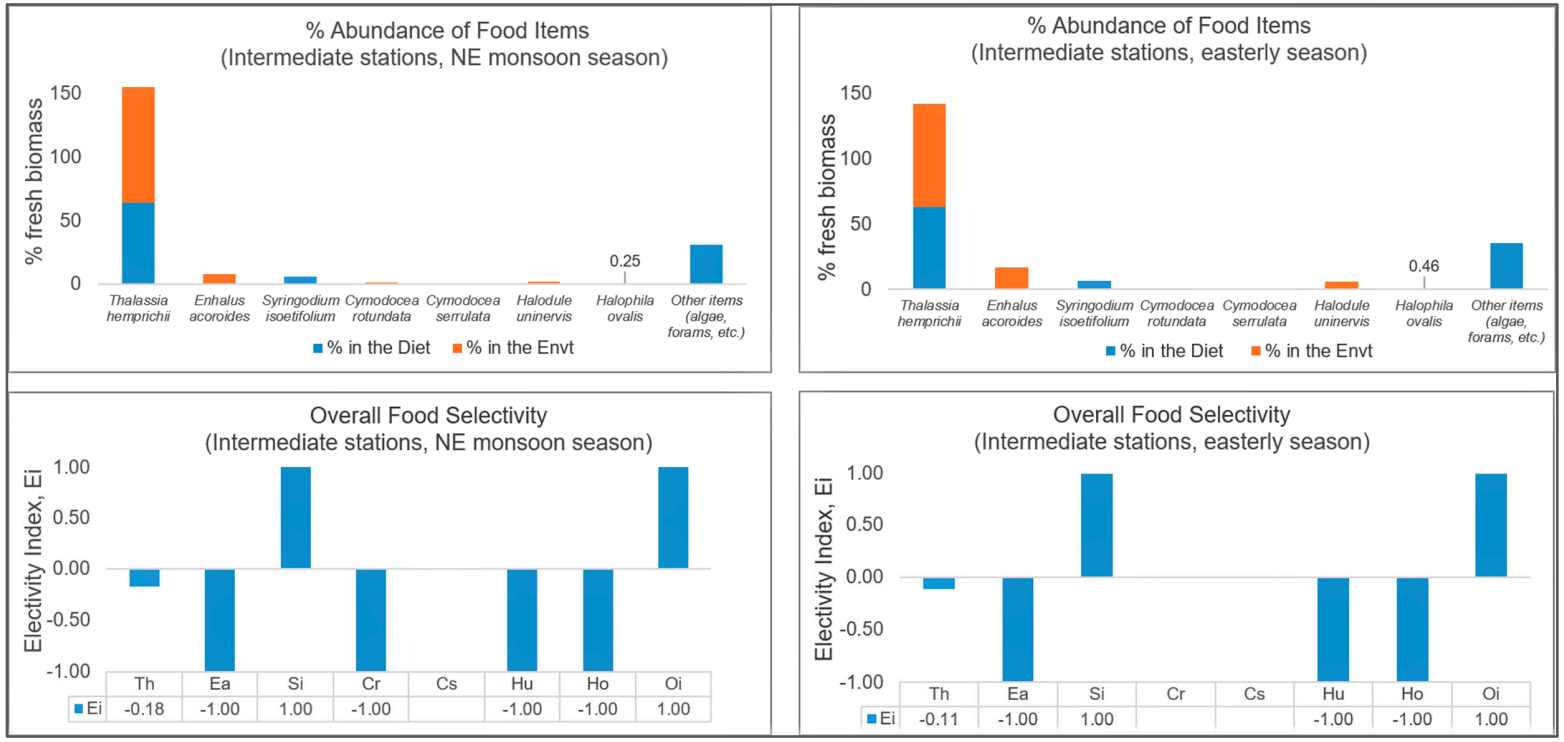
Supplementary Figure 1. Percentage abundance by mean shoot density of the different seagrass species measured in each station within the three areas with respect to their proximity to the fish farms.



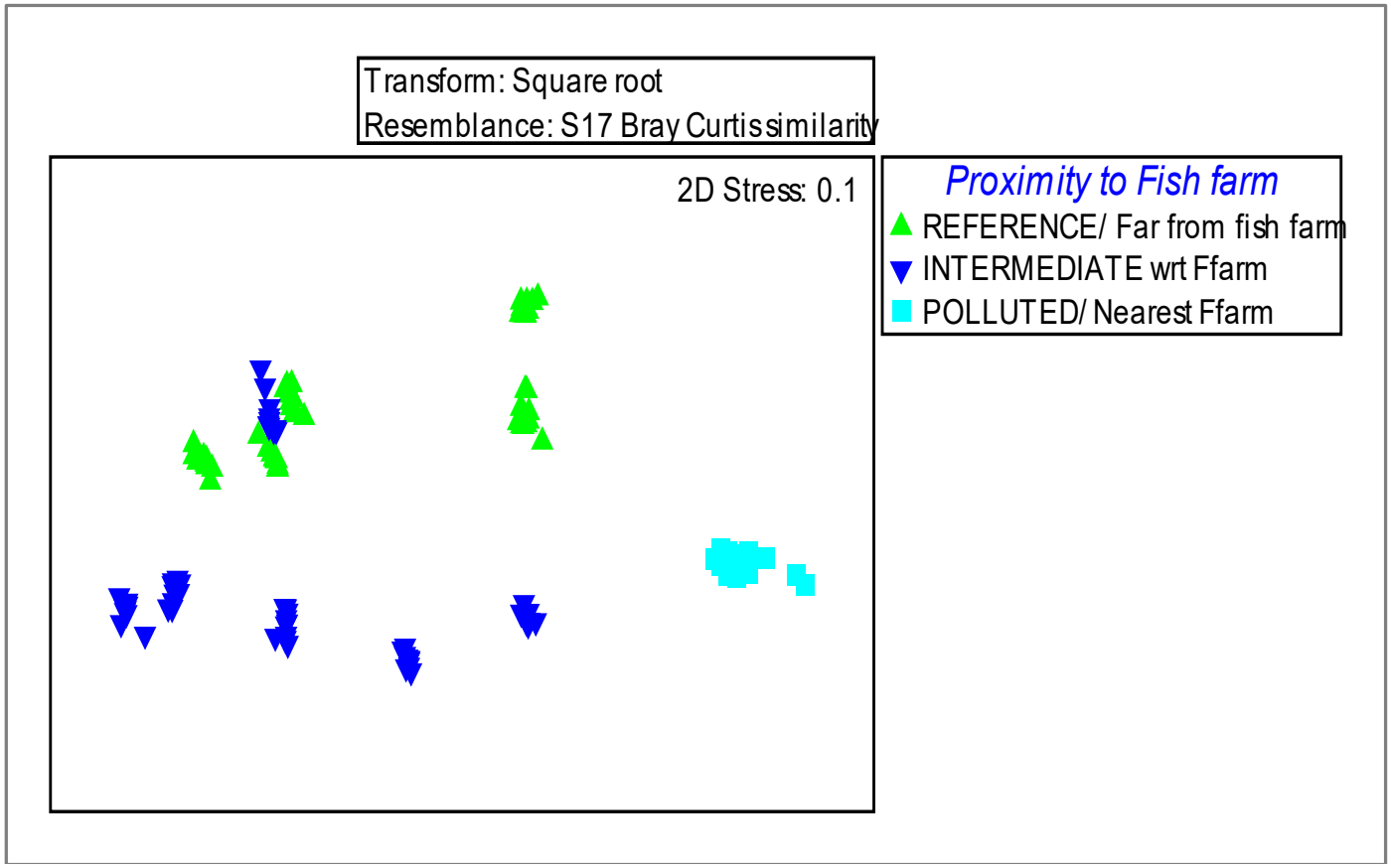
Supplementary Figure 2a. Overall mean % abundance of food items by fresh biomass and the relative selectivity of adult *T. gratilla* with similar size ranges sampled from stations far to the fish farms during the northeast NE monsoon season and easterly season.



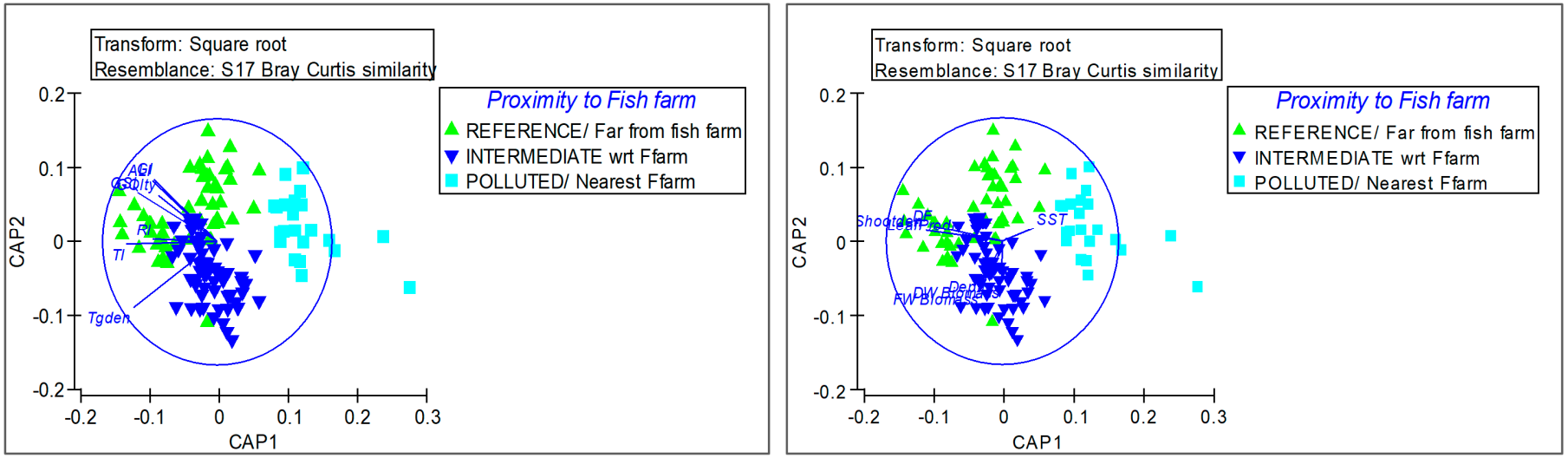
Supplementary Figure 2b. Overall mean % abundance of food items by fresh biomass and the relative selectivity of adult *T. gratilla* with similar size ranges sampled from stations far and near to the fish farms during the southwest SW monsoon season.



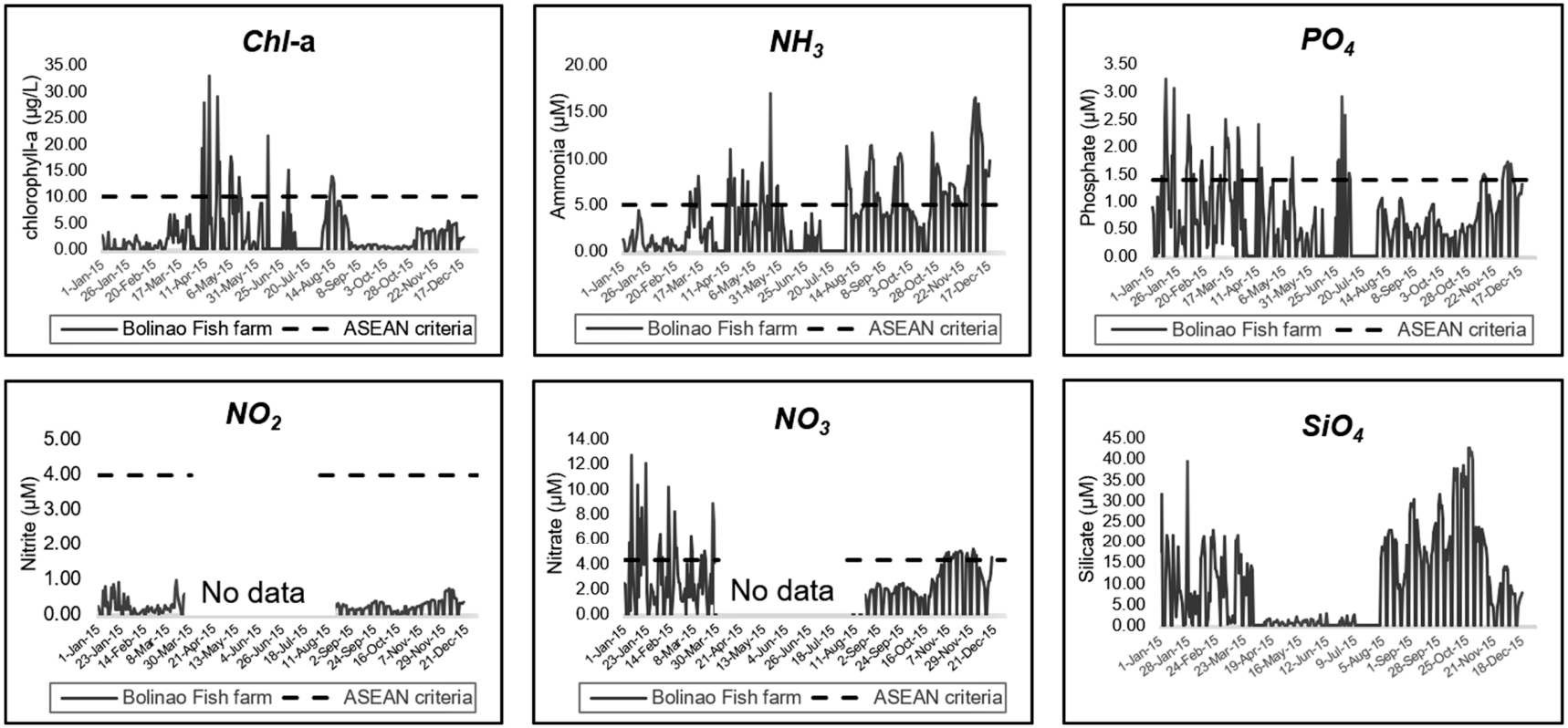
Supplementary Figure 2c. Overall mean % abundance of food items by fresh biomass and the relative selectivity of adult *T. gratilla* with similar size ranges sampled from intermediate stations during the northeast NE monsoon season and easterly season.



Supplementary Figure 3. Unconstrained non-metric MDS plot done to compare the various biological variables (*T. gratilla* multiple phenotypic traits, repletion index, mean density and seagrass abundance measures) shown in CAP (Figure S4) with respect to the main factor "proximity to fish farm", based on Euclidean/ Bray Curtis similarity measure on square root-transformed data.



Supplementary Figure 4. Constrained canonical analysis of principal coordinates (CAP) plots showing the correlation structures in various response variables measured in *T. gratilla* (multiple phenotypic traits, repletion index, mean density) as a response or proximity to the fish farm environment and related factors (left panel graph). The first canonical axis explained 56.1% of the variation while the second axis explained only 15.1%. Vectors show correlations with original variables along the first two CAP axes, indicating the differences in responses of the biological variables with respect to proximity to fish farm, and the influence of related physical water variables as follows (right panel graph): (b.) diffusion factor (DF), sea surface temperature (SST), mean site depth, including the seagrass abundance measures, shoot density (shootden), leaf production (leafprodn), and fresh or dry weight seagrass biomass (FW, DW biomass), in partly explaining variations observed. The biological *T. gratilla* response variables included are: GQlty (Gonad Quality), GSI (Gonad index), ALI (Aristotle's lantern index), GI (Gut index), TTh (Test thickness), TI (Test or body wall index), RI (Repletion index) and *Tg*den (*T.gratilla* density). Details of CAP analyses are shown in Table 1 and 2 in the main manuscript.



Supplementary Figure 5. Monthly concentrations of chlorophyll-*a* and major nutrients monitored in representative stations in the vicinity of the Milkfish cages and pens in Bolinao, with reference values based on ASEAN criteria. Note: two major fish kill events happened (March and June) during the monitoring. Data from the project on "Monitoring of Water Parameters for a Mariculture Site in Bolinao" (San Diego-McGlone, personal communication).