

**ABSTRACT**  
**FACTORS AFFECTING THE GROWTH OF *CYMODOCEA ROTUNDATA***  
**EHRENB. *ET* HEMPR. *EX* ASCHERS., *THALASSIA HEMPRICHII* (EHRENB.)**  
**ASCHERS. AND *ENHALUS ACOROIDES* (L.F.) ROYLE IN THE ISLAND GARDEN**  
**CITY OF SAMAL, DAVAO DEL NORTE, PHILIPPINES**

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The growth response of the seagrasses *Cymodocea rotundata*, *Enhalus acoroides* and *Thalassia hemprichii* to different environmental conditions were determined monthly at four sites in the Island Garden City of Samal (IGACOS) for a period of one year. Seagrass growth measurements included leaf surface area (LSA), areal leaf growth (AGR), and relative growth rates (RGR). In addition, leaf biomass was measured. Physico-chemical parameters were monitored to characterize the four sampling sites, i.e., the diffusive index factor (DIF), and total suspended solids (TSS), nutrient concentration (N and P) in the water column and substrates, and sediment organic matter (OM). Secondary meteorological data from a government agency were also obtained in this study and included in the data analyses. Spatial and temporal variations in LSA, AGR, RGR, and leaf biomass of *Cymodocea rotundata*, *Enhalus acoroides* and *Thalassia hemprichii* were observed. The growth response of the seagrasses *Cymodocea rotundata*, *Enhalus acoroides* and *Thalassia hemprichii* to different environmental conditions were determined monthly at four sites in the Island Garden City of Samal (IGACOS) for a period of one year. Seagrass growth measurements included leaf surface area (LSA), areal leaf growth (AGR), and relative growth rates (RGR). In addition, leaf biomass was measured. Physico-chemical parameters were monitored to characterize the four sampling sites, i.e., the diffusive index factor (DIF), and total suspended solids (TSS), nutrient concentration (N and P) in the water column and substrates, and sediment organic matter (OM). Secondary meteorological data from a government agency were also obtained in this study and included in the data analyses. Spatial and temporal variations in LSA, AGR, RGR, and leaf biomass of *Cymodocea rotundata*, *Enhalus acoroides* and *Thalassia hemprichii* were observed.