Abstract

The Thalassia testudinum dominated seagrass community in the Buccoo Reef/Bon Accord Lagoon Marine Park, measures 0.5 km² and is part of a contiguous coral reef, seagrass bed and mangrove swamp system in southwest Tobago. T. testudinum coverage, productivity and percent turnover rates were measured from February 1998 to February 1999 at four sample locations, while total T. testudinum biomass was measured at two locations in the lagoon from 1992-2002. Productivity and turnover rates varied spatially and seasonally. They were higher in the back-reef area than in the mangrove-fringed lagoon, and were lowest at locations near to a sewage outfall. T. testudinum coverage ranged from 6.6% in the lagoon to 68.5% in the back-reef area while productivity ranged from 3.9 to 4.9 g dry wt m⁻² d⁻¹. Productivity and percentage turnover rates were higher in the dry season (January-June) than in the wet season (July-December). Productivity ranged from 3.0 in the wet season to 5.0 g dry wt m⁻² d⁻¹ in the dry season while percentage turnover rates ranged from 4.2% to 5.6%. Total Thalassia biomass and productivity in Bon Accord Lagoon were compared to six similar sites in the Caribbean that also participate in the Caribbean Coastal Marine Productivity Program (CARICOMP). This seagrass community is being negatively impacted by nutrient-enriched conditions.

Keywords

Thalassia testudinum, Bon Accord Lagoon, CARICOMP, productivity, biomass.