ABSTRACT SEEDLING SURVIVAL AND GROWTH RESPONSES OF ENHALUS ACOROIDESI (1.f.) ROYLE USING BAMBOO "PIPES" UNDER OUTDOOR CULTURE CONDITIONS

Mars Tan University of the Philippines, 2006 Adviser: Dr. Rene Rollon Co-Adviser: Dr. Miguel Fortes Reader: Dr. Benjamin De Jesus Jr.

Large-scale efforts in rehabilitating degraded seagrass meadows over the past years have yet to demonstrate success stories. For transplantation efforts, as commonly practiced, problems include the (1) generally poor survival and growth performance of transplants at the rehabilitation sites, and (2) the corresponding destruction at the donor seagrass meadows. Such problems may be avoided if, instead, seeds (which are abundant for many species of seagrasses) are utilized to recolonize degraded sites. However, the establishment success of these naturally-settling seeds is poor as they roll over across sediments with only minimal wave action. This study evaluates the use of cheap bamboo pipes as possible intervention to enhance settling and establishment success of developing seagrass seedlings at the rehabilitation sites. Under semi-controlled experimental conditions, the reduction in survival and growth performance of Enhalus acoroides seedlings under pipe conditions was assessed. At best, the survival of the treated seedlings over 2-month period could be up to 50% only, but may already be substantial if such value would approximate field success. The intervention also affected significantly the characteristics of the developing seedlings, e.g., lower above- and below-ground biomass, narrower leaves, reduced leaf- and root lengths. We however speculate that these responses are within the wide range in morphological plasticity in seagrasses, and that seedlings would recover soon after the stress (bamboo pipe) is removed.