

LOW-TECH REHABILITATION OF CORAL REEFS THROUGH TRANSPLANTATION OF CORALS: IMPLICATIONS FOR COST-EFFECTIVE MANAGEMENT IN DEVELOPING COUNTRIES By Ulf Lindahl· Kristineberg Marine Research Station, S-450 34 Fiskebackskil, SWEDEN:—Two years of studies on coral transplantation on Mafia Island, Tanzania are summarised. The experiments have focused on the development of simple and cost-effective methods for rehabilitation of degraded coral reefs. The survival and growth of transplanted staghorn corals (*Acropora formosa*) were compared with respect to method of attachment and degree of wave-exposure. In addition, survival and growth was compared between three different species of staghorn corals (*Acropora* spp.) after transplantation to semi-exposed rubble areas and protected sandy areas. In order to evaluate the damage caused by collection of corals for transplantation, the degree of cover of the source-populations was monitored for two years. The effects of the emersion of staghorn corals were studied in order to assess the possibility of long-range transport of corals prior to transplantation. The results show that unattached fragments of staghorn corals can be used to create stable populations with rapid growth rate, even in areas with relatively high wave-energy. These populations also seem to form a suitable habitat for wave-driven fragments of other coral species. The recovery of source-populations seem to be hampered in patches where algae and soft corals are common. The corals survived several hours of emersion, depending on storage conditions and source-habitat (intertidal or subtidal). These results suggest that coral transplantation could, under certain circumstances, be a realistic option for large-scale rehabilitation of degraded coral reefs in developing countries.