UNIVERSITI TEKNOLOGI MARA

THE EFFECT OF MAGNETIC STRENGTH ON GROWTH OF *Acropora sp.* IN LANGKAWI WATERS

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ABSTRACT

Coral reef restoration such as coral propagation are becoming increasingly considered as viable options to mitigate reef degradation. The coral reefs may not be able to recover naturally without human intervention. Recently, the coral reef population in Langkawi has been dwindling due to physical and biological effect. Therefore, these study is to enhance the growth of coral reef by using the direct propagation technique. The healthy colony of *Acropora sp.* was were collected from nearby reefs were attached using underwater epoxy and bind to the fragment disks that were made from the cement. The neodymium magnets was arranged on the fragment disk to create magnetic attraction. Neodymium magnet was used in this study because it has stronger magnetic attraction. According to two-way ANOVA analysis, there were a significant effect within the month for the coral growth ($p<0.05$). Moreover, there is no significant difference between the design for the coral growth ($p>0.050$). The live coral reef rate for two months was 100%. There are strong negative correlation between the growth of *Acropora sp.* and magnetic strength which $r= -0.992$, it was the inverse relationship. In order to improve the research project in the future, the study period need to be more than six months. The selection of coral such as type, size and health of coral also important in determining of the successful of coral propagation and the strategic place should be chosen wisely.